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ABSTRACT

The instructional program presented in this paper was implemented to improve the computer literacy and reduce computer anxiety of the teachers at a junior high school that serves 8th and 9th graders in the southeastern United States. The target group was 65 teachers at the site. The program consisted of 6 hours of instruction and hands-on activities in the use of a computerized gradebook program and continuous on-site support for 12 weeks. Objectives of the program were: an increase of teacher usage of an electronic gradebook to 69% of the total faculty; a score of at least 80% on a post-training test by at least 69% of the faculty; the installation and proper usage of a reformatting program for downloaded class rosters for the gradebook program; and a low level of computer anxiety demonstrated by 69% of the faculty. Objectives of the program were measured by the inspection of teacher's electronic gradebooks, a post-treatment final test, an inspection of reformatted class rosters, and a post-treatment survey. Only the objective related to the reformatting program was met; however, satisfactory improvements were made in all other areas and important insights were gained. Appendices include survey form and results, sign-up form, syllabus, lesson plans, student materials, final test, slides, class survey form and results, formatting program, download instructions, and permission to reproduce. Contains 22 references. (Author/AEF)

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IMPROVING JUNIOR HIGH SCHOOL TEACHER COMPUTER LITERACY THROUGH THE USE OF AN ELECTRONIC GRADEBOOK

by

Randy Shirley

265-86-6180

A Final Report submitted to the Faculty of the Fischler Center for the Advancement of Education of Nova Southeastern University in partial fulfillment of the requirements for the degree of Master of Science

The abstract of this report may be placed in the University database system for reference.

February, 1996

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Abstract

Improving Junior High School Teacher Computer Literacy Through the Use of an Electronic Gradebook
Shirley, Clyde R., 1995. Practicum Report, Nova Southeastern University, Fischler Center for the Advancement of Education.
Descriptors: Computer Literacy/Teacher Training/Electronic Gradebook/Computers/Technology/Computer Aided Instruction

This instructional program was implemented by the author to improve the computer literacy and reduce computer anxiety of the teachers at a junior high school. The target group was 65 teachers at the site. The program consisted of six hours of instruction and hands on activities in the use of a computerized gradebook program and continuous on-site support for 12 weeks. The objectives of the program were an increase of teacher usage of an electronic gradebook to 69 percent of the total faculty; a score of at least 80 percent on a post-training test by at least 69 percent of the faculty; the installation and proper usage of a reformatting program for downloaded class rosters for the gradebook program; and a low level of computer anxiety demonstrated by 69 percent of the faculty. The objectives of the program were measured by the inspection of teachers' electronic gradebooks, a post-treatment final test, an inspection of reformatted class rosters, and a post-treatment survey. Only the objective related to the reformatting program was met, but satisfactory improvements were made in all other areas, and important insights were gained. Appendices include survey form and results, sign up form, syllabus, lesson plans, student materials, final test, slides, class survey form and results, formatting program, download instructions, and permission to reproduce.

Authorship Statement

I hereby testify that this paper and the work it report are entirely my own. When it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other professionals in the field and in the hope that my work, presented here, will earn similar respect.

Clyde R. Shirley
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CHAPTER I

Purpose

Background

The school referred to in this report is a junior high school in a southeastern state. The school was built in 1986 and serves eighth and ninth graders. Most of the students come from homes of higher than average socioeconomic status, and the parents are very involved in school activities and have high expectations of the educational process in general. The School Vision and School Mission statements from the minutes of the school improvement team (1993, p.1) read as follows:

> **School Vision Statement**. Our school and community will provide an integrated learning experience by which students reach their full potential as exemplary citizens.
>
> **School Mission Statement**. The faculty and staff of [the site], in cooperation with parents and community, will provide an integrated learning environment to develop responsible, creative, academically prepared, technologically capable students. Through a variety of teaching methods, our interdisciplinary, multi-cultural curriculum will reach every student, helping them become lifelong learners, critical thinkers, and productive citizens.

The school report card (1994) gives pertinent information about the school. The student population consists of 1,560 students distributed into groups that are white (77.8 percent), black (12.6 percent), Hispanic (7.5 percent), Asian (1.8 percent), and Indian (.3 percent). There are 807 male and 753 female students. The student attendance rate was 93.83

percent in 1994. There are 181 students in gifted programs, 95 with mild disabilities, six with moderate or severe disabilities, and 18 in limited English speaking programs.

The average class size was 25 which placed the average teacher load at 125 students per day. If a teacher gave one test per week, per class, 1,125 averages would have to calculated each nine weeks to maintain a continuous monitoring of the students' performance. If a teacher distributed a progress report to the students once every two weeks, 500 such reports would have to be calculated and printed each nine weeks.

The results from the state Writing Assessment tests indicate that the eighth grade students scored slightly below the district and state averages in the areas of topical, expository, and persuasive writing. However, eighth grade performances on nationally normed achievement tests in the areas of reading and mathematics were significantly higher than the district averages. The average percentile rankings on the Stanford Achievement Test for the eighth graders were 60, 60, and 66, in the areas of reading, language, and mathematics, respectively during the 1994-1994 school year. The rankings for the ninth graders were 61, 65, and 71, for the same areas during the same year.

There are 65 full-time teachers on the site at the beginning of the program with four administrators, three guidance counselors, and 24 support staff. Part-time staff people include an alternative education teacher, a speech therapist, a bilingual aide, a nurse, a psychologist, a

social worker, a staffing specialist for exceptional student education, an occupational specialist, a human relations specialist, and a representative from the Drug Abuse Comprehensive Coordination Office.

Seventy-five percent of the teachers have bachelor's degrees and 25 percent also have master's degrees. Eight teachers have zero to three years of experience, 24 have four to nine years of experience, and 39 have 20 or more years of teaching experience.

Eighth grade students at the site are offered a curriculum of five required courses and 18 elective courses. The required course titles are Language Arts, Mathematics, Physical Education, Science, and Social Studies. Language Arts and Social Studies have regular, advanced, honors, and honors/gifted sections. The elective courses for the eighth grade students include annual and semester subjects. The annual subjects are Art Appreciation 2, Band Beginning, Band Percussion, Band Intermediate, Band Concert, Band Symphonic, Chorus, Employability Skills, Experience of Marketing/Vocational Occupations, Orchestra, Reading, Spanish I, and Spanish II. The semester subjects are Computer Applications, Exploration of Agribusiness/Natural Resources, Exploration of Communication Technology, and Exploration of Home Economics Occupation. Exceptional Student Education (ESE) students are also required to take Language Arts, Mathematics, Science, and Social Studies. ESE students have access to all the regular electives and Social Personal Skills, Career Education/Employment Skills, Unique Skills, Vocational Elective, and Learning Strategies.

Ninth grade students take the same required courses taught with the same sections. The annual electives offered to ninth graders are Art 2-D/3-D, Band I Beginning, Band I Intermediate, Band 1 Symphony, Basic Principles of Materials and Processes Technology, Chorus, Fundamentals of Agriscience, Journalism, Keyboarding and Document Processing, Orchestra, Reading, Spanish I, Spanish II, and Work Experience/On the Job Training. Ninth grade semester elective courses are Communications Systems, Health I/Life Management Skills, Individual and Dual Sports I, Introduction to Drama, Life Management Skills, Practical Keyboarding Skills, and Team Sports. The ninth grade ESE students are required to take the same subjects as the eighth grade students, and the same elective courses are available.

Several teachers sponsor a variety of clubs at the school. These clubs meet once a month on Wednesday, half-day planning days. The clubs include the Music Club, Youth Crime Watch, Career Speakers, Future Farmers of America (FFA), Future Homemakers of America (FHA), Student Council, Fellowship of Christian Athletes (FCA), Human Awareness, and National Junior Honor Society.

The target site has received many awards, and the students have been recognized in many different events on local and state levels. The mathematics teachers have encouraged their students and helped them win many different trophies in Math League Competition in the areas of traditional mathematics, algebra, and geometry. Athletic teams at the site

have won trophies in boys and girls basketball and volleyball. Spanish and typing trophies also sit on the shelves at the school.

The author conducted an interview with the site administrator regarding parent involvement (Kipley, 1995). The parents in this professional community voted two years ago to disband the Parent Teacher Student Association (PTSA) and form a Parent Interest Committee (PIC). The rationale behind this change was based on a desire to avoid a great deal of the red tape involved with traditional PTSA's. The PIC supports the school with fund raisers, projects, testing, bus evacuation (emergency exit procedure), picture days, and many other such activities. The success of the change was evidenced by the school's earning the only Golden School Award and one of the four Silver School Awards given in the county in 1994. To earn the Silver School Award the number of volunteer hours must at least equal the student enrollment. To earn the Golden School Award the number of volunteer hours must be at least twice the student enrollment. In 1994 the number of volunteer hours was in excess of 3,800 hours. The Parent Interest Committee meets once each month. They have sponsored, supported, and paid for several different activities and programs at the site for general school improvement. The PIC paid for the Homework Hotline which is a voice mail system that has greatly improved the communication between parents, teachers, and students. The program allows teachers to leave daily homework assignments on a computerized voice mail system that can be accessed by parents and students by telephone.

Each teacher has an electronic voice mail box, and parents can leave messages for them 24 hours a day. The PIC has paid for the Bruin Award, a system of incentives for the students to improve their academic and conduct grades. The parents also sponsor a Teacher Appreciation Week at the site. Members of the PIC meet with the School Improvement Team to offer support for and have input in the school's future.

The author, in his second year at this school, taught mathematics and Computer Applications to ninth and eighth grade students, respectively. The class load consisted of two regular Algebra I classes and three ungrouped Computer Applications classes. The author was on the School Technology Team, helped maintain the computerized voice mail system, and had become an unofficial computer resource person on the site.

Problem Statement

On page one of Blueprint 2000 (1994), the school improvement plans for the state, the following paragraph was written:

> In response to growing concern about our nation's future economic success, a commission headed by the U.S. Secretary of Labor conducted a comprehensive study of American business and the work force. The SCANS report (Secretary's Commission of Achieving Necessary Skills), released in 1991, summarized its findings with this message: Good jobs depend on people who can put knowledge to work. New workers must be creative and responsible problem solvers. . . . High paying, but unskilled, jobs are disappearing. The Secretary's Commission chose

to focus on 'what work requires of schools,' recognizing that schools do more than prepare people for a job. From this massive study, the following conclusions were reached:

- The qualities of high performance currently found only in our most competitive companies must become the standard for the vast majority of our companies.
- Schools must be retooled into high-performance organizations, preparing students to be successful adults.
- Students must develop a new set of competencies and foundation skills to be successful adults in this economy.

Blueprint 2000 was the state's response to the nation's concern about the future of education. Section three of the document deals with funding levels and priorities. Three areas are targeted for immediate attention: training, assessment, and technology. On page 17 of the document (Florida Commission on Education Reform and Accountability, 1994) a description of the attention given to technology was found (italics mine):

> The availability and appropriate use of technology are key to the success of Blueprint 2000 schools. As teaching changes from dispensing knowledge to helping students access in information they need to apply in solving problems, the need for technology becomes obvious. Technology should be used as a major information source for students in schools. Information is doubling every five years, and teachers can no longer be the prime source of information if students are to meet the high expectations of Blueprint 2000 schools. Technology also provides teachers with tools to *monitor and report individual student progress*; provides information to school advisory councils and the school community for needs assessment, planning, and

> reporting; and can enhance efficient and effective daily operation of schools. Technology also allows many students with disabilities to participate in the educational process in order to become productive citizens in a competitive society. In short, *technology is necessary to help teachers teach and students learn*.

Goal three of Blueprint 2000 deals with student performance. Three of the 10 standards listed for this goal deal with computers and/or technology. Standard number one (Florida Commission of Education Reform and Accountability, 1994, p.26) reads as follows (italics mine):

> [Our] students locate, comprehend, interpret, evaluate, maintain, and apply information, concepts, and ideas found in literature, the arts, symbols, recording, *video and other graphic displays*, and *computer files* in order to perform tasks and/or for enjoyment.

Standard number two (Florida Commission on Education Reform and Accountability, 1994, p.27) also mentions computer technology (italics mine):

> [Our] students communicate in English and other languages using information, concepts, prose, symbols, reports, audio and video recordings, speeches, *graphic displays*, and *computer-based programs*.

Standard number seven (Florida Commission on Education Reform and Accountability, 1994, p.30) emphasizes technology and technology systems (italics mine):

> [Our] students integrate their knowledge and understanding of how social, organizational, informational, and *technological systems* work with their abilities to analyze

> trends, design and improve systems, and use and maintain *appropriate technology*.

Goal six of Blueprint 2000 deals with teachers and staff. Standard number one (1994, p.38) for this goal sets the standard for teacher skills. On page 38 the document states that teachers will demonstrate professional skills using "technology to manage systems of instruction, record keeping, and reporting systems where appropriate."

The target site was located in a county that recognizes the importance of teacher computer skills. The junior high school was in the process of converting to a middle school within two years. The county has written Using Technology to Improve Instruction describing goals and expectations of the use of technology in the county's middle schools. On the third page of the plan (1995), the first phase, teacher orientation, was detailed. Included in the list of hardware and software provided for teachers' use was an electronic gradebook. On page ten of the document two basic functions of instructional technology are listed. A description of the first function reads:

> Technology provides the team with a way of reducing the time individual teachers spend on grading, assessment and classroom management, and increasing the effectiveness of communicating with parents and colleagues.

Specific examples of the application of this function are also listed. One of the primary concepts of the middle school is the team concept. The first specific example of the application (1995, p.10) of the first function was, "The team will be able to share the task of inputting students into an electronic gradebook. They can also collaborate on the

creation of interim progress reports that these grading programs can produce." The county expects its teachers to use a computer to maintain grades and aid in classroom instruction.

The writers of Blueprint 2000 and county planners expect both teachers and students to be computer literate. Students are expected to have the ability to use computers and other technological systems to solve problems and in general, be better prepared for a job in real life. Educators are becoming aware of changes that others in industry have noticed. In a speech made by Garcia (1993) to the New Mexico Parent Teacher Association in Las Vagas, a study commissioned by the U.S. Department of Labor called Workforce 2000 was cited. This study predicted that 75 percent of the jobs that existed in the U.S. in 1990 will not exist in the year 2000. Mr. Garcia estimated the shelf life a new engineering degree to be about three years. The rapid changes in technology must be reflected in educational systems and the industrial society. Thompson and Smith (1992) surveyed the attendees of a meeting of the American Management Association regarding qualifications of college graduates. Those surveyed indicated, among other things, that they were not satisfied with the level of computer literacy of many college graduates. Phelps (1995) is an assistant professor at the School of Journalism at Southern Illinois University. He surveyed more than 300 media directors in the Midwest in an effort to improve a course he taught. Those surveyed were asked to rank the importance of certain skills in the work of advertising professionals. Of the skills listed

computer literacy and analytical ability tied as most important. Forty-six percent of those who answered the survey indicated that they were not pleased with the knowledge of those who were applying for jobs. The directors were not satisfied with the applicants' knowledge of media software. Graggs and Flynn (1991) cited a study done related to Personal Computer (PC) training done by companies in the U.S. At companies with more than 100 employees, 63 to 65 percent received formal PC training, and companies with fewer than 100 employees gave 82 percent of their people the same training. Computer training was seen as necessary and an aid to employee productivity. In a similar study, Lee (1991) concluded that 78 percent of the companies with 100 or more employees gave formal training in the area of basic computer skills.

Experts in industry and education stress the importance of computer skills for high school graduates. The state and county school systems of the targeted site are allocating significant funds to increase and improve the use of computers by teachers and students. It has been shown that students learn as well if not better using computers in the classroom (Rockman, 1992). Northup, Barth, and Kranze (1991) found that multimedia computer lessons raise retention levels to 80 percent compared to a 10 percent retention rate for lectures, 20 percent for lectures with visual aids, and 40 percent for lectures with visual aids and discussions.

Advocates of computer aided instruction have made many promises regarding student success. For the most part these promises are

unfulfilled. Computer anxiety and lack of teacher computer literacy are problems. As a primary computer resource person at the target site, the author has noticed that only a small number of teachers at the site use a computer either as a management tool or an aid to instruction. The author sought to introduce more teachers to computers using an application that would provide sufficient motivation to overcome computer anxiety and provide enough hands-on experience to increase computer literacy. The author observed and the literature indicated that many teachers began their experience with computers by learning to use an electronic gradebook if on-site support was available. When the author became a member of the mathematics faculty, only two mathematics teachers were using an electronic gradebook. Before implementation of the program there were nine mathematics teachers using the program.

The author administered a survey to the faculty to gather information regarding teacher attitudes toward computers, electronic gradebooks, computer aided instruction, and computer training (Appendix A:42). Ninety surveys were placed in the mailboxes of the faculty and staff at the site, and thirty-four surveys were returned. The results were tallied and averaged (Appendix A:42). The survey item that received the lowest average response was item six, "I use a computer as an instructional aid in my classroom on a regular basis." More than half of the respondents indicated that they did not use an electronic gradebook program. Item eight received the highest average response. This item read, "If more computer training were available, I would participate." In

general, the author concluded from the survey that a significant number of teachers did not use an electronic gradebook program, the teachers believed that computer usage was important for teachers and students, and all the teachers surveyed had a positive attitude toward training. The use of an electronic gradebook program would save time for the teachers and allow them to spend more time for class preparation. It took the author about 45 minutes to average the grades for a class of 30 students using a calculator and writing out progress reports by hand. Using a computer gradebook program the author entered a set of test grades and printed progress reports in 10 minutes, a savings or 35 minutes per class, per week. A teacher with five classes would save almost three hours per week or 27 hours per grading period. If all 65 teachers at the site used the gradebook program 1,755 teacher-hours could be used for other activities each grading period. In a year 7,020 teacher-hours could be saved. Also, a gradebook program was a good way to introduce novice users to a computer (Boseman, 1991).

The school had a site license for an electronic gradebook program, but very few teachers are using it. During the 1993-1994 school year four teachers at the site used the program. During the 1994-1995 school year, of the 65 teachers on the site there are 14 are using the a gradebook program. Nine of the teachers using the program are in the mathematics department. There are 13 teachers in the mathematics department which places the percentage of teachers using the electronic gradebook at 69. Only 22 percent of the teachers at the site are using the gradebook

program to assist in the maintaining of class records. It was the author's contention that with instruction and on-site support available to all the teachers at the site, the percentage of all teachers using the gradebook program should equal that of the mathematics department. There was a discrepancy in usage of 47 percent. There was a need to increase the use of the electronic gradebook program by all teachers at the site to the point that at least 69 percent of them are using the program on a regular basis.

The student rosters for each class could be downloaded from the mainframe computer in the county office. These rosters could be copied onto disks for the teachers to import into the gradebook program. This importing of the rosters saves a great deal of time for the teachers who would otherwise have to type in all the information for each student in each class or keep records by hand. The text files from the county office mainframe were not in a format compatible with the gradebook program, and they needed be reformatted to be used. The program to reformat these files was written in BASIC and was difficult to use by anyone not familiar with the steps required to load and run a BASIC program. Work limitations prevented the author from being able to download all of the rosters needed in a timely manner. If the reformatting program were easier to use several different office personnel would be able to download and reformat the class rosters sooner than what was currently the case. There was a need to write a program that is relatively easy to use that would reformat the class roster files for use with an Microsoft Disk

Operating System (MS-DOS) gradebook program, a Windows gradebook program, or a MacIntosh gradebook program.

Outcome Objectives

The author observed that an increase in computer literacy was a worthy and obtainable objective at the target site. The state and county administrators expect teachers to be computer literate and to use computers to maintain and report student progress. The author concluded that the introduction of an electronic gradebook program to more teachers at the site would increase their computer literacy and lead them to increase their use of computers as a management tool and an aid to classroom instruction. The author proposed to establish a teacher training program to train the teachers at the site to use an electronic gradebook program.

After the completion of a 12-week teacher training program and on-site support, at least 69 percent of the 65 teachers at the site would be using an electronic gradebook program on a weekly basis as measured by an inspection of the teachers' computer generated gradebooks.

After the completion of a 12-week teacher training program and on-site support, 69 percent of the 65 teachers at the site would demonstrate a critical understanding of the proper use of an electronic gradebook as a management tool as measured by an average score of 80 percent on a post-training objective test (Appendix F:97).

After two weeks of programming, instruction, and on-site support a

more user friendly reformatting program would be installed on the computer in the student affairs office and at least two of the secretaries would be able to download and format the class rosters, as measured by the inspection of five error free, downloaded class rosters by each secretary.

After the completion of a 12-week teacher training program and on-site support, 69 percent of the 65 teachers at the site would demostrate a low level of computer anxiety as measured by an average response of 3.75 on a four point scale on a attitudinal survey (Appendix H:131).

CHAPTER II

Research and Solution Strategy

The literature indicates that there are several barriers to teacher computer literacy and usage. Also, the literature suggests that if these barriers are removed more teachers will use computers to maintain records and teach in the classroom. Training in the use of a computerized gradebook program would accomplish these goals.

Since its introduction in the early 1980's the personal computer has been viewed by educators as a potentially powerful tool. Large investments of time and money have been made attempting to realize this potential. Some success and a great deal of disappointment have been encountered. Becker (1990) at the Center for Research on Elementary and Middle Schools at Johns Hopkins University conducted a nationwide field experiment to ascertain the effects of computer use on mathematics achievement in grades five through eight. The experiment included 96 classes and 56 teachers from 31 schools in 25 districts in 16 states. The classes were divided into two groups. Forty-eight were in "computer" classes and 48 were in "traditional" classes. The "computer" classes were to have at least one computer for every four students and the students were to receive at least 30 hours of computer time per child, per year, and the teachers had to have at least two years of computer-use experience. The "traditional" classes would address the same

mathematics curriculum without any computer access or instruction. After the first year 11 teachers from nine schools agreed to continue another year. A variety of standardized tests were given before and after treatment to measure any significant differences in the performances of the two groups. The results were analyzed, and a comparison of aggregate effect sizes was made. Overall, there was no significant difference between students using computers and students using traditional methods. It was concluded that just providing the machines and the software were not enough to guarantee success in the classroom. One outstanding finding of the study was the success rate of the teachers who continued for a second year. The effect sizes were greater for this group than for any other. The author did not specify the reason for this greater success rate.

Becker (1991) also reported on the results of a survey done by the International Association for the Evaluation of Educational Achievement (I.E.A.). The statistics for the United States portion of the survey were analyzed. The teachers surveyed included elementary teachers of grades four to six, secondary computer education teachers, and grade eight to grade 12 teachers of math and science. One thousand four hundred sixteen schools were sampled, and information was gathered from 1,265 principals, 1,227 school-level computer coordinators, and 3,062 teachers. The survey compiled information concerning computer hardware and computer use. One of the major findings was that the

number of computers and computer terminals in U.S. schools has increased from approximately 50,000 in 1980 to 240,000 in 1989. Access to computers is not the problem it was in the eighties. Another finding concerned the different computer uses of different teaching groups. Of the groups surveyed English teachers make more use of computers as a productivity enhancement tool than teachers in the other groups (math, science, elementary). English teachers made more use of the computers' word processing capabilities. The study also revealed two major impediments to the effective use of computers in the classroom. Teachers need better tools with better instructions, and teachers must want to use computers in the classroom. It could be concluded that computer availability, adequate instruction, and teacher motivation are important elements in effective classroom instruction with computer technology.

Sheingold and Hadley (1990) from the Center for Technology in Education at Bank Street College of Education conducted a nationwide survey of teachers who were known for their successful integration of computers into classroom teaching. The teachers questioned taught grades four through 12 and were from all 50 states. Six hundred eight teachers returned the 16-page questionnaire. The major findings were that these teachers were comfortable with technology, there were more computers in the schools where these teachers taught, these teachers used computers for many different purposes, and these teachers expected more from their students. The teachers indicated through the

survey that two of the biggest impediments to even better computer use were the lack of time required to figure out how to use computers well and the lack of hardware. The three greatest contributions to their success were the teachers' own motivation, access to technology, and on-site support and colleagueship. One theme appearing in this study that was not as prevalent in others was the emphasis of on-site support. The surveyors concluded that on-site support is vital to successful use of computers in the classroom.

Hasselbring, as cited by Barker (1994), also identified barriers to the successful use of technology in education. One major limitation was a lack of teacher computer education and training. Good computer training programs had cooperative-based learning environments. This led Barker to train her teachers in pairs. Another positive component was the employment of educational technologists as change agents. Again, the importance of on-site support was emphasized.

Ellis and Kuerbis (1991) were also interested in teacher computer training; they developed a curriculum to improve the quality and quantity of microcomputer use in science teaching. The curriculum was developed, field tested, and revised. Fifty sets of the final curriculum were sent to trainers of science teachers. Information was gathered about the group leaders and participants using questionnaires and attitudinal surveys. The curriculum as a whole was found to be effective at improving participants' knowledge and attitudes related to using computers to teach science. However, a follow-up study at one university

revealed that 67 percent of the teachers were not using computers one year after the workshop. The highest ranking barriers to greater implementation were listed as lack of money, lack of time to prepare, and lack of available equipment and supplies. The local environment was determined to be a powerful influence on a teacher's use of the computer.

Research done by McInerney, McInerney and Sinclair (1990) indicated that the availability of a computer influences computer anxiety. First year university students were used to determine the effectiveness of a particular computer course at reducing computer anxiety. The Computer Anxiety Rating Scale was administered before and after the intervention and the results were compiled and analyzed. Also, a questionnaire was given obtaining information regarding sex, age, ethnic background, ownership of a Personal Computer (PC), intentions to purchase a PC, use of computers and associated computer linked equipment, attendance at single sex or coed school, and self-ranking of computer competence. One significant finding was that those who owned a PC and rated themselves as "advanced" reported almost no anxiety, while "advanced" students who did not own a PC reported levels of anxiety significantly greater.

The research done by Overbaugh (1993) indicated that computer anxiety may be effectively reduced by a short term (six hours) use of an application that requires little knowledge about the computer. Two groups of pre-service education majors were used in the study. One group participated in an interactive video program that used computers to

simulate classroom management problems. The other group completed a Computer Awareness Module dealing with computer terminology, educational uses of computers, and introductory programming in BASIC. Computer anxiety was measured by the Self-Evaluation Questionnaire. Significant results indicated that the anxiety level for the simulation group was lowered more than the level for the Computer Awareness Module group.

The study done by Hignite and Echternacht (1992) led to the conclusion that teachers who viewed computers as helpful in instructional management activities had less computer anxiety. A typical item in a portion of the Computer Attitude Scale, used to measure the teachers' attitudes toward computers, might ascertain a teacher's attitude about computers easing the burden of recording student grades. Also, teachers who saw computers as useful in class management liked computers more than those who did not see them as helpful management tools. These findings seem to be corroborated by the research of Boseman and Spuck (1991) who concluded that teachers feel that the most important application of computers for themselves, as well as their students, is as tools to help with administrative tasks. Computers do reduce the amount of time required to do certain administrative tasks. Vockell (1993) concluded that an electronic gradebook program reduced the amount of time required to do seven record-keeping tasks to about one-sixth that of a regular gradebook.

Pina and Harris (1994) suggested that the use of a computer to compute student grades helps reduce anxiety and increase confidence in teachers being introduced to technology. Pina and Harris are educational technologists and teacher educators who teach courses and conduct workshops for preservice and inservice teachers at colleges and universities. They listed 22 strategies used to reduce anxiety in beginning computer users that have been successful according to course evaluations and exit interviews with students. Strategy 14 is, "Make their professional lives easier." Students are asked to average grades first without and then with a computer to see first hand the advantages of using technology. When teachers saw the relevance of computer technology to their daily tasks, their anxiety was decreased and motivation was increased.

Strategy 11 listed by Pina and Harris (1994) also reaffirmed the importance of cooperative learning. This strategy reads, "Use cooperative learning strategies." When students work in pairs peer tutoring is just one of the several benefits that eases computer anxiety.

Solution Strategy

The research cited above suggested that if the machines were available, training was available, preparation time was available, on-site support was available, and relevance was observed, then teachers would use computers first as a management tool and then as an aid to instruction. The survey of Sheingold and Hadley (1990) highlighted the

importance of on-site support. The research of Ellis and Kuerbis (1991) and McInerney, McInerney, and Sinclair (1990) demonstrated the importance of machine availability and preparation time. The study by Overbaugh (1993) implied that computer training that is more relevant to an area of teacher interest reduces computer anxiety more than training that is purely computer oriented. The author concluded from the work of Hignite and Echternacht (1992), Boseman and Spuck (1991), and Vockell (1993) that an electronic gradebook program would be a good starting point to begin the task of increasing computer literacy among classroom teachers.

The author designed and implemented a 12-week program aimed at training the teachers at the site in the use of an electronic gradebook program. It was expected that this program would be the first of several such programs developed at the site.

CHAPTER III

Method

This is a description of the implementation of the proposal in a chronological sequence. The author was responsible for all aspects of the project. The cooperation of the site administrators and teachers was vital to the success of the implementation process.

Prior to Implementation

The author was on the Technology Committee at the site and requested that part of the available technology funds be used to purchase a computer for the English department Teacher Planning Area (TPA). With the purchase of this machine at least one computer was available in each departmental TPA. This computer arrived at the site and was installed before the program implementation. There was at least one computer with the gradebook program installed in each TPA on the campus.

The author prepared the syllabus (Appendix C:49), the lesson plans (Appendix D:52), the student materials (Appendix E:65), the final test (Appendix F:97), and computer generated slide presentations for the training sessions (Appendix G:105).

Weeks One and Two

The author requested and received permission from the appropriate district supervisor and the site principal to begin the implementation. A sign up form and course syllabus were distributed to all the teachers, and they were asked to volunteer to participate in the training program. The program was introduced to the entire faculty during a session on one of the pre-planning days at the beginning of the school year. The author dressed up as a fictitious super hero, Digiman, to encourage the teachers to participate. The response to Digiman's appearance was mixed but positive; no one forgot that the program was being offered.

The site principal agreed to give inservice credits for teachers who completed the training. The program included homework assignments to be completed and turned in. After the two three-hour training sessions were completed, the author realized that only a few teachers were going to take the time to complete all of the assignments and turn them in by the deadline given in the course syllabus. Six inservice points were given to each teacher who attended the two training sessions, and an extra four inservice points were given to all teachers who turned all of the assignments.

The author wrote a stand-alone, executable program that would format the text files downloaded from the county mainframe (Appendix I:135). The author wrote out the instructions for the use of the program (Appendix J:141) and trained two of the office secretaries to

download and format the files for the teachers to use with the gradebook program.

Weeks Three and Four

The first problem encountered during the program was encountered at this point. The office secretaries are very busy during the day, and it was difficult for them to add another task to their already full schedule. Two of the secretaries learned to download and format the class rosters, but they could not devote enough energy to complete all of the downloads to deliver the rosters to the teachers on time. The county main frame computer was very busy during regular school hours making the job even more difficult to do. The author completed the downloads by staying at the site after regular working hours on two nights. The time required to transfer the files was less than a third that of the time required during the day. However, as classes change and new teachers come to the site, one of the secretaries is able to download a set of class rosters within a reasonable period of time. The formatting program was used to arrange the data for each class in a fashion that was acceptable to the gradebook program. This reformatting allowed the author to import the student information for each class, for each teacher into files that were copied onto separate disks. The teachers did not have to type in the information for each student; a great deal of time was saved for each teacher.

Week Five

The writer used three hours on each of two Wednesday half-days to begin instructing those volunteering teachers in the use of the site approved gradebook program. The author used multimedia presentation software (Appendix G:105), lecture, peer tutoring, demonstration, and hands-on class assignments to complete the instruction. On the first training day 32 teachers were present. The training took place in the media center using computers gathered from different locations on the campus. Each teacher was given a syllabus (Appendix C:49) and the student materials for the first three lessons (Appendix E:65). The teachers were encouraged to find a partner to work with during the duration of the training. The author followed prepared lesson plans (Appendix D:52) to carry out the instruction. He observed the teachers as they completed the class assignments for lessons one, two, and three, and he circulated among them to answer questions, encourage progress, and make suggestions. The author made himself available to the teachers during two class periods each day and on Tuesday and Thursday afternoons for support and individual instruction.

Week Six

During week six a major problem was encountered. Many of the teachers who were using the gradebook program on the Macintosh platform were complaining about difficulty opening and saving files. Often a user would enter new grades and recalculate the averages only to have

the program lock up or indicate a critical error. At this point when the program was restarted the original class file would not open again, or it would be empty when it was opened. This caused a great deal of consternation for the majority of the users on the Macintosh platform (about half of the teachers), and it was especially frustrating to those teachers who were attempting to use a computer seriously for the first time. The problem was finally attributed to an incompatibility of the software with the newer Macintosh operating system used on PowerMacs and PowerPCs. One of the teachers at the site contacted the Grade2™ support personnel as did the author. The company worked on the problem and sent a new version of the program to the site. The new version still had problems, and eventually a third version was sent. At the time of the preparation of this report it appeared that the problems had been remedied. While the problems were being worked on the author encouraged the teachers to use the program on a Macintosh without the newer operating system or at least use it without trying to transfer files between operating systems. Teachers who used the program consistently with the same operating system encountered fewer problems. The author concluded that several teachers became discouraged and stopped using the program as a result of these operating system problems. During week six the author met with many teachers providing support, encouragement, and instruction during the day and after school hours.

Week Seven

The author met with the teachers in the media center on the second Wednesday half-day to finish the instruction in the use of program. Twenty-three teachers were present at this time. The writer passed out the student materials for the final three lessons, and used multimedia software to present the material. After a review of previous material the new presentations and class activities were conducted. The writer answered questions during the presentations, observed the teachers during the class activities, and circulated as the teachers worked on the computers. The author reminded the teachers that he was available two class periods during the day and on Tuesday and Thursday afternoons after school. The teachers were also reminded of the due dates for the different assignments.

Weeks Eight through 11

During these weeks the author provided support and individual instruction for the teachers learning to use the gradebook program. A great deal of this time was spent trying to determine the cause of the Macintosh operating system problem. The author met with teachers as they walked to class, during two different class periods each day, during lunch, and after school hours. The teachers turned in assignments to be checked and communicated with the writer by leaving messages in his mail box, by leaving messages in his voice mail box, by calling him at home, and by coming by his classroom. The different questions asked by

the teachers included those related to installing the program, special grading formulas, adding and deleting students, using a mouse, using Windows, using the program on an older computer, using extra credit grades, printing grade reports, copying category and grade information between classes, making backup copies of grades, and starting a new grading period. The author sent out a reminder to all the teachers during week 11 reminding them of the deadline for turning in class assignments, the inservice credit, the availability of support, the final test (Appendix F:97), and the survey (Appendix H:99).

Week 12

The author continued to check assignments that were turned in and provide support for the teachers. The writer gave out the Final Test and Class Survey to all teachers who participated in the program. The tests and surveys were collected for the next week. The author also questioned the entire faculty to determine the number of teachers who had started using the program even though they had not participated in the class sessions.

One Week After

The writer compiled and analyzed the results of the Final Test and Class Survey. Several suggestions were made by teachers regarding future training sessions. Preparation has already begun for one of these suggested training sessions.

CHAPTER IV

Results

The first objective was for at least 69 percent of the 65 teachers at the site to be using an electronic gradebook on a weekly basis, as measured by a post-treatment inspection of teachers' computer generated gradebooks. Thirty-three of the 65 teachers met this criterion which is a participation rate of 51 percent. This objective was not met, but the results encouraged and satisfied the author. It is the author's opinion that the problems encountered with the newer Macintosh operating system had a significant impact on this objective. Also, many of the teachers indicated that they did not have enough time to learn to use the program to the point that it was a benefit to them. The teachers who were able to get help from other teachers or the author were more successful.

The second objective was for at least 69 percent of the 65 teachers at the site, to demonstrate a critical understanding of the proper use of an electronic gradebook program, as measured by an average score of 80 percent on a post-training objective test. Only nine of the teachers took the objective test, and the average score was 78. Six of the nine teachers who took the test scored at least 80. The second objective was not met. After talking to some of the teachers the author concluded that many felt anxious about taking a computer related test. The teachers were told that they should not put their names on the test, but six of the nine tests returned had names on them. Apparently, many teachers forgot that the

tests would be taken anonymously and were uncomfortable about having their performance critiqued by one of their peers. Also, the test covered several areas of the gradebook program that are not used often. In reality, the teachers probably would not rely on memory to deal with these areas; they would refer to the student materials or ask someone for help. Perhaps, a test contributes more to the anxiety related to computer usage.

The third objective was for a more user friendly formatting program to be installed on the computer in the student affairs office and that at least two of the secretaries would be able to download and format the class rosters, as measured by the inspection of five error free, downloaded class rosters by each secretary. This objective was met. Two of the secretaries learned to download the class rosters and did so. However, the secretaries are very busy during the day, and it is difficult for them to find the time to download the rosters. The mainframe is busy during regular working hours, adding to the difficulty of the task.

The last objective was for 69 percent of the 65 teachers at the site to demonstrate a low level of computer anxiety as measured by an average response of 3.75 on a four point scale on an attitudinal survey (Appendix H:131). Twenty-three survey forms were returned, and the average response was 3.21 (Appendix H:135). Five of the surveys had an average response that was above 3.75. Even though this objective was not met, the surveys indicated an attitude toward computers and computer usage that was more positive than negative. The author was

satisfied that the gradebook program contributed to this positive attitude in spite of the problems encountered.

CHAPTER V

Recommendations

The first recommendation relates to hardware and software compatibility. The gradebook program had been used at the target site for at least six months by the author and a few other teachers. A problem was encountered when the program was used with a new operating system. Hardware should be thoroughly researched and/or tested before it is purchased. If possible, software should be reviewed for at least 30 days with all available hardware before it is purchased. A great deal of money is being spent by educators on hardware and software throughout the state and nation. If this money is not spent wisely the public will not be very understanding.

More on-site training should be given, and the teachers should be given time during regular working hours to participate in the training. Many private businesses offer training for their employees in this manner. Why should the training of teachers be any less important? Also, many private businesses require their employees to take certain training that is considered necessary. Why should not teachers be required to take certain technology related training that is offered during the regular work day? If the training is offered strictly on a voluntary basis some teachers will not participate.

A better method of downloading the class rosters from the county

computer should be developed. The author has spoken with one programmer in the county office about this problem. The programmer indicated that a faster method could be arranged, but it would have to be an improvement that several schools would use. The writer intends to continue to work with the supervisor of technology for the county to gain support for the expenditure of funds required for the programming hours needed to make this change.

Another recommendation relates to on-site support. The writer has observed that those teachers who have support that is close and quickly available are more successful than those who spend more time learning alone. The author will be a full-time technology resource person for the target site beginning with the 1996-97 school year. This change will greatly increase the amount of support available to the teachers. However, the writer believes that even greater improvements can be made if a technology contact person can be secured for each department or team on the campus. These contact persons would be responsible for distributing information, coordinating training, and providing support for the teachers on their teams. These teachers could be given a small supplement to compensate them for their time; the money could be taken from the annual technology incentive funds.

The author recommends that the class sizes for future training sessions should be smaller. It is difficult to provide the level of support that is required to help some teachers overcome their computer anxiety. Highly motivated teachers should be trained by the site technology

resource person with the understanding that each trained teacher will agree to train two others. The author observed during the implementation of the program that many teachers learned as much from other teachers as they did from the training classes and the author's support. Perhaps, the training could begin with the technology resource person and the team technology contact persons and then pyramid down with each trained person training two others.

The last recommendation concerns topics for future classes. Several teachers have asked about the multimedia software used by the author for the training sessions. The technology committee has approved the purchase of a computer that will be available to the teachers; this computer will run the multimedia software. Training in the use of this software should be made available to the teachers. More extensive training in the use of a word processor would also be a benefit. A training session has been set to instruct the mathematics teachers in the use of an equation editor (part of word processor application). This equation editor will enable mathematics teachers to write tests that have more of a professional appearance. Additional topics include the use of electronic mail, research on the internet, desktop publishing, and subject related software.

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Appendices

Appendix A

Survey Form and Results

Appendix A

Survey Form

Please do not put your name on the form. Return to Mr. Shirley's mailbox when completed. Circle the number that best describes your response to each statement. Please use the following guide:

1 = Strongly disagree, 2 = Disagree, 3 = No opinion, 4 = Agree, 5 = Strongly agree

1. I use a computer on a regular basis.

   1 2 3 4 5

2. I use an electronic gradebook on a regular basis.

   1 2 3 4 5

3. I issue progress reports to my students on a regular basis.

   1 2 3 4 5

4. I feel comfortable using a computer.

   1 2 3 4 5

5. I am satisfied with my computer expertise.

   1 2 3 4 5

6. I use a computer as an instructional aid in my classroom on a regular basis.

   1 2 3 4 5

7. I think that the use of computers is important to classroom instruction.

   1 2 3 4 5

8. If more computer training were available, I would participate.

   1 2 3 4 5

9. There are enough computers available at our school.

   1 2 3 4 5

Survey Results

Item #	Survey Item					Average Response
1.	I use a computer on a regular basis.					
	1	2	3	4	5	
Tally	6	8		9	11	3.32
2.	I use an electronic gradebook on a regular basis.					
	1	2	3	4	5	
Tally	19	1		3	11	2.59
3.	I issue progress reports to my students on a regular basis.					
	1	2	3	4	5	
Tally	4	7	3	9	11	3.47
4.	I feel comfortable using a computer.					
	1	2	3	4	5	
Tally	4	5	3	13	9	3.53
5.	I am satisfied with my computer expertise.					
	1	2	3	4	5	
Tally	8	14	3	4	5	2.53
6.	I use a computer as an instructional aid in my classroom on a regular basis.					
	1	2	3	4	5	
Tally	20	5	3	5	2	1.97
7.	I think that the use of computers is important to classroom instruction.					
	1	2	3	4	5	
Tally			4	17	14	4.29

Survey Results cont'd

8. If more computer training were available, I would participate.

	1	2	3	4	5	
Tally				9	24	4.73

9. There are enough computers available at our school.

	1	2	3	4	5	
Tally	18	6	4	2	4	2.06

Appendix B

Sign Up Form

Appendix B

Sign Up Form

I would like to participate in the computer training offered at [the site] beginning on September 27, 1995, and ending on November 17, 1995. I realize that I will be attending two three-hour inservice sessions on two Wednesday half-days. I understand that the training is designed to help me use the gradebook program Grade2™. I understand that I will complete six assignments and take a final test (taken anonymously).

Please sign and return to Mr. Shirley's mailbox by September 15.

_____ _____

(signature) (date)

Appendix C

Syllabus

Appendix C

Syllabus

INSTRUCTOR: Randy Shirley
PHONE: 744-6261, ext. 8000

COURSE DESCRIPTION: This course is designed to familiarize the student with the electronic gradebook program Grade2™ from Excelsior®. Upon completion of this course the student will be able to maintain class grades and issue progress reports for their students and parents. Students will attend six hours of instruction, complete six assignments, and take a final test. The six assignments will lead the student to set up and maintain class grades and issue progress reports. The final test is given to provide feedback to the instructor. The student **will not** place his/her name on the **final test**.

PREREQUISITE: No prerequisites.

INSERVICE CREDIT: Six inservice credit points will be given.

TIME LINE:

August 21 - September 15	Sign up for course
September 27	Three hour inservice
October 6	Complete Assignment One
October 12	Three hour inservice
October 13	Complete Assignment Two
October 20	Complete Assignment Three
November 3	Complete Assignment Four

November 10 ..... Complete Assignment Five

November 17 ..... Complete Assignment Six, Final Test

Appendix D

Lesson Plans

Appendix D

Lesson Plans

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON ONE

GOALS

1. The student will be able to name the parts of and describe the functions of the main screen.

2. The student will understand and use program menu operations.

ACTIVITIES

1. Pass out materials and discuss course syllabus.

2. Introduce Grade2™ using a short demonstration of the program.

3. Introduce the parts of the main screen using lecture, multimedia presentation software, and Handout 1.1.

4. Do Class Activity 1.1.

5. Review the parts of the main screen using oral questions and answers.

6. Introduce the pull down menus using a short demonstration, lecture, multimedia presentation software, and Handout 1.2.

7. Do Class Activity 1.2.

8. Review pull down menus using oral questions and answers.

9. Assign Assignment One.

LESSON PLAN
LESSON ONE cont'd

MATERIALS

1. One computer for each pair of students with Grade2™ software installed.
2. A prepared diskette for each student.
3. Copies of the course syllabus, Handout 1.1, Handout 1.2, Class Activity 1.1, and Class Activity 1.2 for each student.
4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Class observation during class activities.
2. Oral questions and answers.
3. Evaluation of Assignment One.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON TWO

GOALS

1. The student will be able to define the parts of a class file.

2. The student will demonstrate an understanding of a class file organization.

3. The student will be able to open a template class file, import students from a prepared diskette and customize the file to meet his/her personal grading requirements.

ACTIVITIES

1. Introduce the parts and structure of a class file using lecture, multimedia software presentation, and Handout 2.1.

2. Demonstrate how to open and customize a template file and import students using lecture, multimedia software presentation, and Handout 2.1.

3. Do Class Activity 2.1.

4. Review using oral questions and answers.

5. Assign Assignment Two.

MATERIALS

1. One computer for each pair of students with software installed.

2. A prepared diskette for each student.

3. Copies of Handout 2.1, Class Activity 2.1, and Assignment Two for each student.

LESSON PLAN
LESSON TWO cont'd

4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Class observation during class activities.
2. Oral questions and answers.
3. Evaluation of Assignment Two.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON THREE

GOALS

1. The student will customize his/her class files by entering the appropriate general information.

2. The student will customize his/her class files by entering his/her letter grade break points, and adding, deleting, and weighting grade categories.

3. The student will customize his/her class files by adding, deleting, and weighting individual grades.

ACTIVITIES

1. Demonstrate the proper procedure for entering the general information, customizing grade categories, and customizing individual grades, using a short lecture, and Grade2™ software presentation.

2. Do Class Activity 3.1.

3. Review using oral questions and answers.

4. Assign Assignment Three.

MATERIALS

1. One computer for each pair of students with software installed.

2. A prepared diskette for each student.

3. Copies of Handout 3.1, Class Activity 3.1, and Assignment Three for each student.

LESSON PLAN
LESSON THREE cont'd

4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Observation during the class activity.
2. Oral questions and answers.
3. Evaluation of Assignment Three.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON FOUR

GOALS

1. The student will edit a class file by changing and deleting scores.
2. The student will edit a class file by deleting a student and adding a student.
3. The student will be able to use extra credit as part of his/her grading criteria.

ACTIVITIES

1. Demonstrate the proper procedure for editing student grades and student class enrollment, using a short lecture and Grade2™ software presentation.
2. Do Class Activity 4.1.
3. Review using oral questions and answers.
4. Assign Assignment Four.

MATERIALS

1. One computer for each pair of students with software installed.
2. A prepared diskette for each student.
3. Copies of Class Activity 4.1 and Assignment Four for each student.
4. One multimedia computer, a TV link, and three 27 inch monitors.

LESSON PLAN
LESSON FOUR cont'd

EVALUATION

1. Observation during the class activity.
2. Oral questions and answers.
3. Evaluation of Assignment Four.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON FIVE

GOALS

1. The student will print class grades and individual student progress reports.
2. The student will use the student notepad to enter information about student behavior and information for parents.
3. The student will use graphs to display grade information.

ACTIVITIES

1. Demonstrate the proper procedure for printing class grades and individual progress reports.
2. Do Class Activity 5.1.
3. Demonstrate the proper procedure for using the notepad.
4. Do Class Activity 5.2.
5. Demonstrate the proper procedure for using the graphs option.
6. Do Class Activity 5.3.
7. Review with oral questions and answers.
8. Assign Assignment Five.

MATERIALS

1. One computer for each pair of students.
2. One printer for every four students.

LESSON PLAN
LESSON FIVE cont'd

3. A prepared diskette for each student.

4. Copies of Class Activity 5.1, Class Activity 5.2, Class Activity 5.3, and Assignment Five for each student.

5. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Observation during the class activities.

2. Oral questions and answers.

3. Evaluation of Assignment Five.

4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON SIX

GOALS

1. The student will customize the modem settings and screen colors for his/her class files.

2. The student will understand how to create a special grading formula.

3. The student will sort class files by student name and student ID.

4. The student will use the statistics option to display statistical information about class and individual student performance.

5. The student will use proper precautions regarding grade security.

ACTIVITIES

1. Demonstrate the use of the Options menu to customize modem settings and screen colors.

2. Demonstrate the procedure for creating a special grading formula.

3. Demonstrate the procedure for sorting class files.

4. Demonstrate the proper use of the statistics option under the Utilities menu.

5. Do Class Activity 6.1.

6. Describe the means for maintaining grade security using lecture, multimedia software presentation, and Handout 6.1.

7. Review using oral questions and answers.

8. Assign Assignment Six.

LESSON PLAN
LESSON SIX cont'd

MATERIALS

1. One computer for each pair of students.
2. A prepared diskette for each student.
3. Copies of Class Activity 6.1, Handout 6.1, and Assignment Six for each student.
4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Observation during class activities.
2. Oral questions and answers.
3. Evaluation of Assignment Six.
4. Final Test.

Appendix C

Syllabus

INSTRUCTOR: Randy Shirley
PHONE: 744-6261, ext. 8000

COURSE DESCRIPTION: This course is designed to familiarize the student with the electronic gradebook program Grade2™ from Excelsior®. Upon completion of this course the student will be able to maintain class grades and issue progress reports for their students and parents. Students will attend six hours of instruction, complete six assignments, and take a final test. The six assignments will lead the student to set up and maintain class grades and issue progress reports. The final test is given to provide feedback to the instructor. The student **will not** place his/her name on the **final test**.

PREREQUISITE: No prerequisites.

INSERVICE CREDIT: Six inservice credit points will be given.

TIME LINE:

August 21 - September 15	Sign up for course
September 27	Three hour inservice
October 6	Complete Assignment One
October 12	Three hour inservice
October 13	Complete Assignment Two
October 20	Complete Assignment Three
November 3	Complete Assignment Four

November 10 ..... Complete Assignment Five

November 17 ..... Complete Assignment Six, Final Test

Appendix D

Lesson Plans

Appendix D

Lesson Plans

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON ONE

GOALS

1. The student will be able to name the parts of and describe the functions of the main screen.

2. The student will understand and use program menu operations.

ACTIVITIES

1. Pass out materials and discuss course syllabus.

2. Introduce Grade2™ using a short demonstration of the program.

3. Introduce the parts of the main screen using lecture, multimedia presentation software, and Handout 1.1.

4. Do Class Activity 1.1.

5. Review the parts of the main screen using oral questions and answers.

6. Introduce the pull down menus using a short demonstration, lecture, multimedia presentation software, and Handout 1.2.

7. Do Class Activity 1.2.

8. Review pull down menus using oral questions and answers.

9. Assign Assignment One.

LESSON PLAN
LESSON ONE cont'd

MATERIALS

1. One computer for each pair of students with Grade2™ software installed.
2. A prepared diskette for each student.
3. Copies of the course syllabus, Handout 1.1, Handout 1.2, Class Activity 1.1, and Class Activity 1.2 for each student.
4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Class observation during class activities.
2. Oral questions and answers.
3. Evaluation of Assignment One.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON TWO

GOALS

1. The student will be able to define the parts of a class file.

2. The student will demonstrate an understanding of a class file organization.

3. The student will be able to open a template class file, import students from a prepared diskette and customize the file to meet his/her personal grading requirements.

ACTIVITIES

1. Introduce the parts and structure of a class file using lecture, multimedia software presentation, and Handout 2.1.

2. Demonstrate how to open and customize a template file and import students using lecture, multimedia software presentation, and Handout 2.1.

3. Do Class Activity 2.1.

4. Review using oral questions and answers.

5. Assign Assignment Two.

MATERIALS

1. One computer for each pair of students with software installed.

2. A prepared diskette for each student.

3. Copies of Handout 2.1, Class Activity 2.1, and Assignment Two for each student.

LESSON PLAN
LESSON TWO cont'd

4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Class observation during class activities.
2. Oral questions and answers.
3. Evaluation of Assignment Two.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON THREE

GOALS

1. The student will customize his/her class files by entering the appropriate general information.

2. The student will customize his/her class files by entering his/her letter grade break points, and adding, deleting, and weighting grade categories.

3. The student will customize his/her class files by adding, deleting, and weighting individual grades.

ACTIVITIES

1. Demonstrate the proper procedure for entering the general information, customizing grade categories, and customizing individual grades, using a short lecture, and Grade2™ software presentation.

2. Do Class Activity 3.1.

3. Review using oral questions and answers.

4. Assign Assignment Three.

MATERIALS

1. One computer for each pair of students with software installed.

2. A prepared diskette for each student.

3. Copies of Handout 3.1, Class Activity 3.1, and Assignment Three for each student.

LESSON PLAN
LESSON THREE cont'd

4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Observation during the class activity.
2. Oral questions and answers.
3. Evaluation of Assignment Three.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON FOUR

GOALS

1. The student will edit a class file by changing and deleting scores.
2. The student will edit a class file by deleting a student and adding a student.
3. The student will be able to use extra credit as part of his/her grading criteria.

ACTIVITIES

1. Demonstrate the proper procedure for editing student grades and student class enrollment, using a short lecture and Grade2™ software presentation.
2. Do Class Activity 4.1.
3. Review using oral questions and answers.
4. Assign Assignment Four.

MATERIALS

1. One computer for each pair of students with software installed.
2. A prepared diskette for each student.
3. Copies of Class Activity 4.1 and Assignment Four for each student.
4. One multimedia computer, a TV link, and three 27 inch monitors.

LESSON PLAN
LESSON FOUR cont'd

EVALUATION

1. Observation during the class activity.
2. Oral questions and answers.
3. Evaluation of Assignment Four.
4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON FIVE

GOALS

1. The student will print class grades and individual student progress reports.

2. The student will use the student notepad to enter information about student behavior and information for parents.

3. The student will use graphs to display grade information.

ACTIVITIES

1. Demonstrate the proper procedure for printing class grades and individual progress reports.

2. Do Class Activity 5.1.

3. Demonstrate the proper procedure for using the notepad.

4. Do Class Activity 5.2.

5. Demonstrate the proper procedure for using the graphs option.

6. Do Class Activity 5.3.

7. Review with oral questions and answers.

8. Assign Assignment Five.

MATERIALS

1. One computer for each pair of students.

2. One printer for every four students.

LESSON PLAN
LESSON FIVE cont'd

3. A prepared diskette for each student.

4. Copies of Class Activity 5.1, Class Activity 5.2, Class Activity 5.3, and Assignment Five for each student.

5. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Observation during the class activities.

2. Oral questions and answers.

3. Evaluation of Assignment Five.

4. Final Test.

ELECTRONIC GRADEBOOK
LESSON PLAN
LESSON SIX

GOALS

1. The student will customize the modem settings and screen colors for his/her class files.
2. The student will understand how to create a special grading formula.
3. The student will sort class files by student name and student ID.
4. The student will use the statistics option to display statistical information about class and individual student performance.
5. The student will use proper precautions regarding grade security.

ACTIVITIES

1. Demonstrate the use of the Options menu to customize modem settings and screen colors.
2. Demonstrate the procedure for creating a special grading formula.
3. Demonstrate the procedure for sorting class files.
4. Demonstrate the proper use of the statistics option under the Utilities menu.
5. Do Class Activity 6.1.
6. Describe the means for maintaining grade security using lecture, multimedia software presentation, and Handout 6.1.
7. Review using oral questions and answers.
8. Assign Assignment Six.

LESSON PLAN
LESSON SIX cont'd

MATERIALS

1. One computer for each pair of students.
2. A prepared diskette for each student.
3. Copies of Class Activity 6.1, Handout 6.1, and Assignment Six for each student.
4. One multimedia computer, a TV link, and three 27 inch monitors.

EVALUATION

1. Observation during class activities.
2. Oral questions and answers.
3. Evaluation of Assignment Six.
4. Final Test.

Appendix E

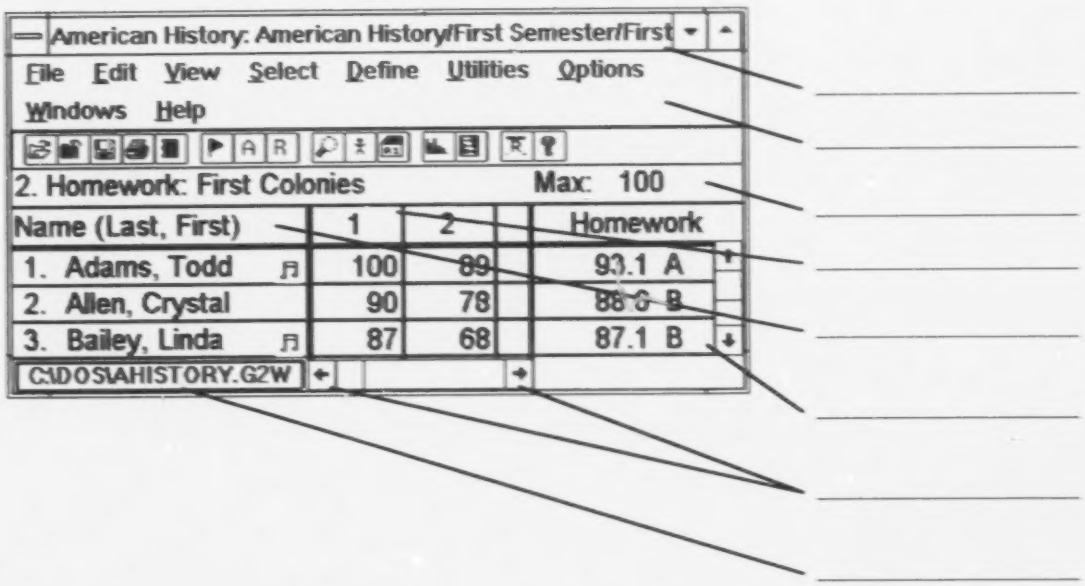
Student Materials

Appendix E

Student Materials

ELECTRONIC GRADEBOOK
HANDOUT 1.1

Fill in the names of the parts of the main screen as they are given to you during the demonstration and lecture.



MAIN SCREEN PARTS

1. **Title Bar:** Gives you information about Subject, Semester, and Grading Period you are viewing.

2. **Menu Bar:** The second line on your screen which lists the menus containing operations and options you can access by pulling down the menu.

HANDOUT 1.1 cont'd

3. **Status Line:** Gives you information about your current grading column.

4. **Student Index:** Lists information about your students.

5. **Assessment Columns:** If have grades in you file, they are displayed in columns on the screen.

6. **Result Column:** Located on the right side of your screen. It displays one of the various summaries that is calculated from your grade information.

7. **Scroll Bars:** Allow you to quickly move up down through your students, and left and right through your grades with your mouse.

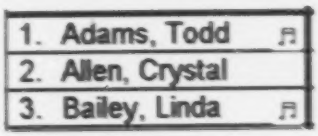
8. **Information Line:** Gives you the name and path of the class file you are viewing and/or editing.

HOT SPOTS

Some locations on the main screen offer quick access to information and other parts of the program. These locations are called hot spots.

1. **Student Index:** Double-click here to change the student index item that you wish to display.

2. **Student Notepad:** Double-click on the "musical notes" to see notes on individual students.



3. **Grade Column Data:** Double-click in the box at the top of the column to view or change the description of an individual assignment.

1	2	
100	89	

4. **Result Column:** Double-click here to change the level of grades you wish to see in the result column.

Homework

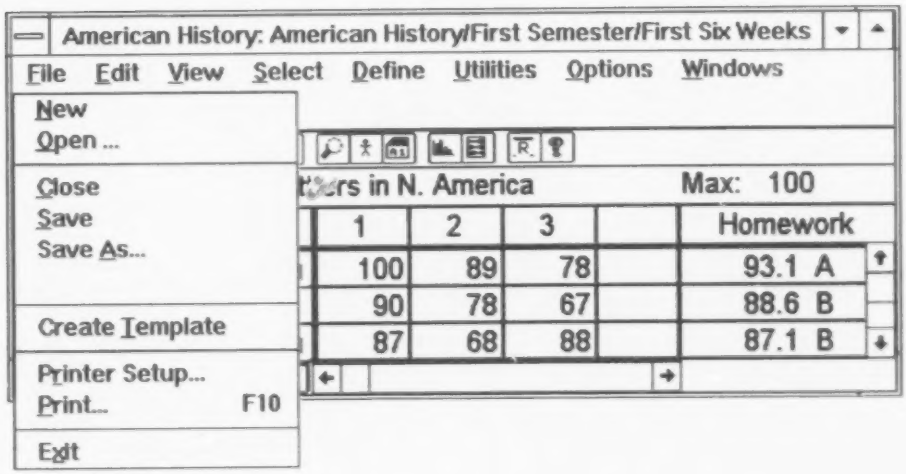
ELECTRONIC GRADEBOOK
HANDOUT 1.2

PULL DOWN MENUS

1. By clicking on any item in the menu bar a separate menu is pulled down.

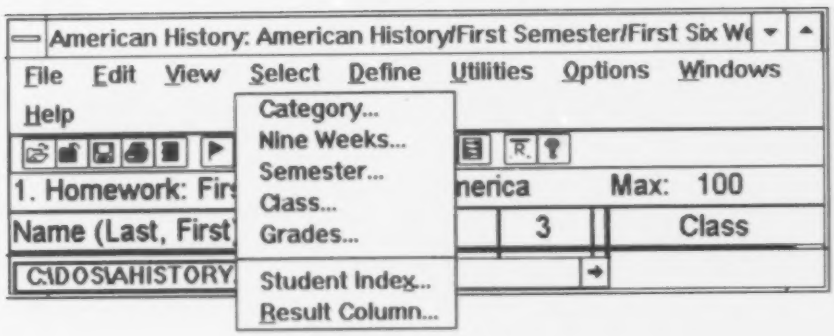
American History: American History/First Semester/First Six Weeks
File Edit View Select Define Utilities Options Windows Help

2. Each menu item has several options.

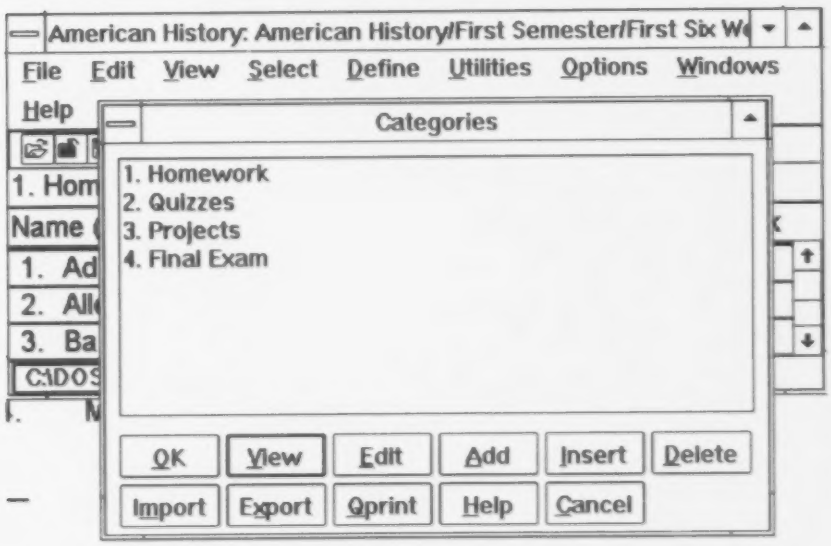


3. Selecting an item from a pull down menu will immediately change your class file settings or give you a dialog box with more choices. Menu options that have three dots (...) following the description, activate dialog boxes.

HANDOUT 1.2 cont'd



4. Many of the dialog boxes have similar choices.



OK: Accepts any data currently entered and closes the box.

View: Views the details of the highlighted item.

Edit: Allows the editing of the highlighted item.

Add: Places a new item at the end of the list in the dialog box.

HANDOUT 1.2 cont'd

Insert: Places a new item before the item currently highlighted.

Delete: Removes the highlighted item.

Import: Reads a list of items from a data file.

Export: Writes the current list of items to a data file.

Qprint: Prints a short report of the information contained in the box.

Help: Activates the On-Line Help system.

Cancel: Closes the box canceling the current changes.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 1.1

Use your computer to do the following activities with your partner.

1. Turn on you monitor and computer (laptops do not have a separate switch for the monitor).

2. Double-click on the Grade2™ icon.

3. Click on the "OK" button on the opening message.

4. Click on the "OK" button in the file dialog box to open the American History class.

5. Locate the eight parts of the main screen.

6. Use the up and down scroll bars to move through the students.

7. Use the left and right scroll bars to move through the grades.

8. Double-click on the hot spot, Student Index, to view the information there. Double-click on Student ID and then click on "OK". Double-click again on the Student Index and change the viewed information back to Name.

9. Click on one of the Student Notepad hot spot for Todd Adams and then double-click on the Progress Report to read the notes there. Click on "OK" and then click on "OK" again to close the Student Notepad dialog box.

10. Double-click on the box at the top of Grade Column 1, to view information about this assignment. Click on "OK" to close the dialog box.

11. Double-click on the box at the top of the Result Column, click on Nine Weeks, and click on "OK". Notice that the grades in the result now reflect the grade for the nine weeks. Change the Result Column back to the Homework grade by choosing Category instead of Nine Weeks.

CLASS ACTIVITY 1.1 cont'd

12. Double-click on the closing button in the extreme upper, left-hand corner of screen to exit the program.

13. Turn off the monitor and computer.

14. Congratulations! Digiman would be proud!

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 1.2

Use your computer to do the following activities with your partner.

1. Start up program and open the American History file.
2. Pull down the File menu and select the Print option.
3. Use the vertical scroll bars to look through the list of different reports available.
4. Click on "Cancel" to return to the main screen.
5. Pull down the Utilities menu and select the Bar Graph option.
6. Select the Result Column option and look at the graph; choose "OK" to return to the main screen.
7. Pull down each menu item and explore the different options.

ELECTRONIC GRADEBOOK
ASSIGNMENT ONE
Name:_____

Please complete and return to Mr. Shirley's mailbox.

1. Start the Grade2™ program and open the American History file.

2. Select column 5 and write the information that you see in the status line.

   Category: _____ Title of Grade: _____

3. Select column 16. Write the name of the new category represented in the result column.

   Category: _____

4. Pull down the Define menu and select Categories. Write the names of the categories listed there.

   Categories: _____

5. Pull down the Edit menu and select Attendance. Write the first absence listed for Todd Adams.

   Date: _____

6. What menu in Grade2™ would you use to add or remove students from your class?

   Menu: _____

7. What menu would you use to change the information displayed in the result column?

   Menu: _____

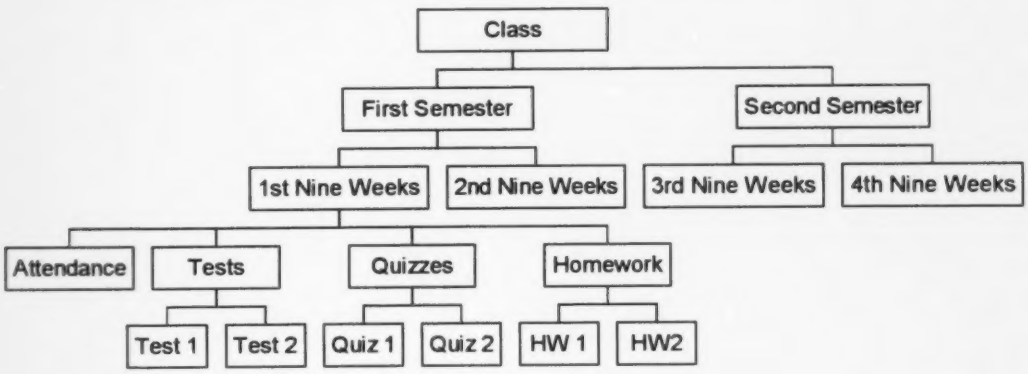
8. What menu would you use to print a report?

   Menu: _____

ELECTRONIC GRADEBOOK
HANDOUT 2.1

PARTS OF A CLASS FILE

1. The general structure of a class is illustrated below.



2. The parts of the class file are defined as follows:

   Class: A group of students in a particular class period that are scheduled to be in the class the entire year (entire semester for semester courses).

   Semester: Half of a regular school year.

   Nine Weeks: A regular grading period in our county.

   Categories: The different areas that make up a student's grade; attendance, tests, quizzes, and homework in this example.

   Grades: The individual grade components for the students.

3. Adding and deleting students from the Class will be discussed later.

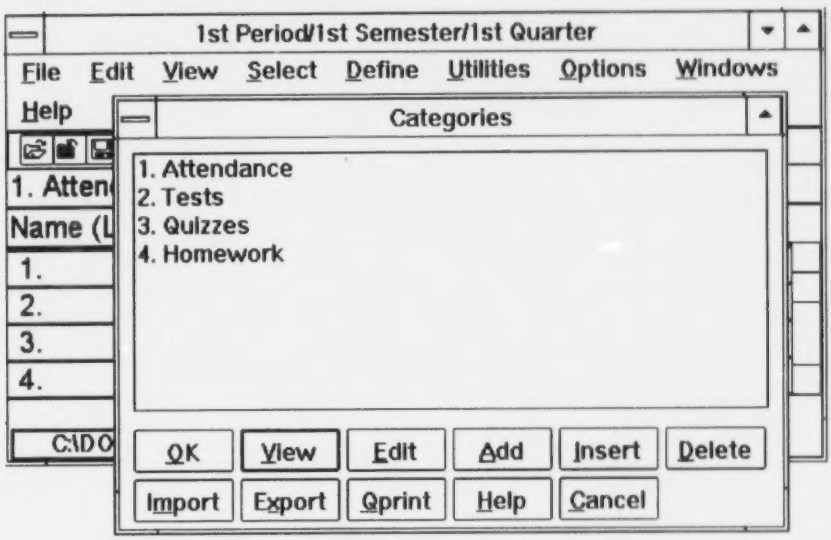
4. The Semester and Nine Weeks divisions are set for the year and do not need modification.

HANDOUT 2.1 cont'd

5. The Attendance division of the Categories should not be changed, since every student will have the option of earning four, two, of zero points for attendance.

6. The Categories of Tests, Quizzes, and Homework can be deleted, expanded, or condensed according to each teacher's method of grading. Other Categories can be added, also.

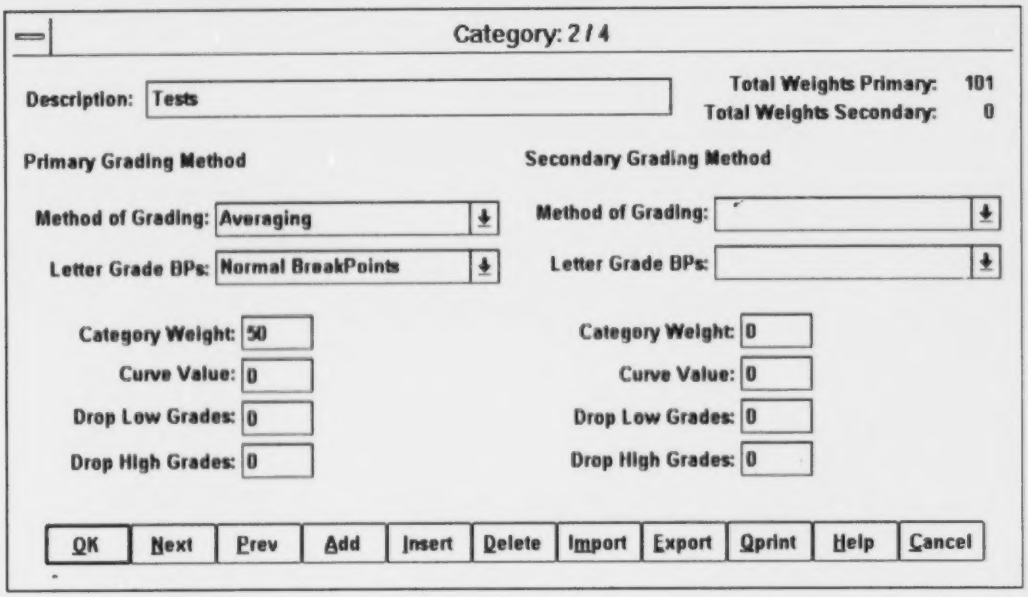
7. A Category can be deleted by selecting the Define menu and then selecting the Categories option.



8. The mouse is used to highlight the Category to remove; clicking on Delete removes the item.

HANDOUT 2.1 cont'd

9. By highlighting a particular Category in this box and selecting Edit, you can view and change the details of the Category.



USING A TEMPLATE FILE

1. The class rosters for each teacher have been downloaded and stored by sequence number on the teacher's diskette.

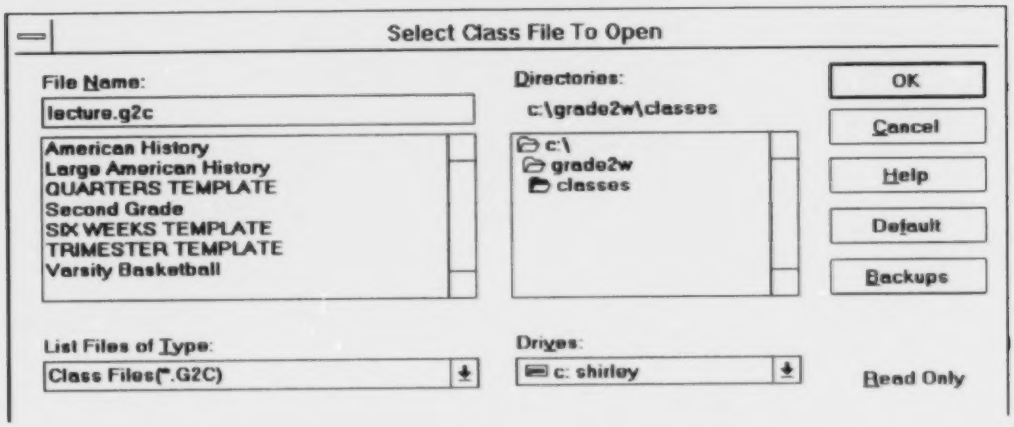
2. On each teacher's diskette are files named first, second, third, fourth, fifth, sixth, and seventh. Your students will be imported into these files.

3. You can open these class files, customize them, and save them on your diskette.

4. You can open a file from the diskette by selecting the drive where the diskette is located.

HANDOUT 2.1 cont'd

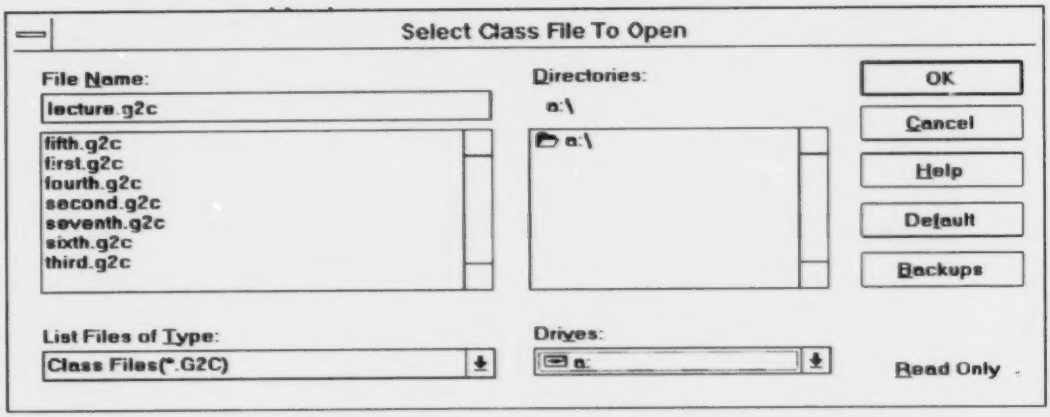
5. This selection is made from the Open File dialog box which appears when the program is started or when the File menu is selected and the Open option is chosen.



6. By clicking on the scroll bar near the Drives list, a list available drives is shown.

7. When the appropriate drive is selected a list of available files is displayed under the Files Name list.

8. You can select the desired file with a mouse click.



9. With the file open you can click on Edit and select Students to see the Students dialog box.

10. Select Import to see a list of class rosters to choose from.

11. Select the sequence number that corresponds with the appropriate class period.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 2.1

Complete the following activities on the computer with your partner.

1. Turn on the computer and when the dialog box for selecting a file appears, click on the arrow by the "Drives:" window and select "a:".

2. From the list of files under the "File Names:" window, select a class file to edit.

3. Select Students from the Edit menu.

4. Select Import and then choose the sequence that corresponds to the file that was chosen in step 2.

5. Click on OK to exit the Student dialog box.

6. From the Define menu select the Categories option to view the grade categories that have been set up for this class.

7. Double-click on each category to view the details of each.

8. Use the Cancel option to return to the main screen.

9. Repeat steps 3, 4, and 5 to view the details of the Grades and return to the main screen.

10. From the Define menu select General Information and examine the details of this dialog box; use cancel to return to the main screen.

11. From the Define menu select Letter Grades and double-click on Normal BreakPoints. Examine the details of this dialog box and return to the main screen.

12. Leave the computer on for the next activity.

ELECTRONIC GRADEBOOK
ASSIGNMENT TWO
Name:_____

Complete and return to Mr. Shirley's mailbox.

1. Open one of the class files from your diskette.

2. Write the names of the different grade Categories.

   Names: _____

3. Write the names of the grade Categories that you plan to use for your classes.

   Names: _____

4. Write the different weights that you will give to each of your grade Categories.

   Weights:_____

5. Write the names of the different Grades that are on your diskette.

   Names: _____

6. What is the Category Weight for Tests?

   Category Weight: _____

7. What is the Score Weight for Quiz 1?

   Score Weight: _____

ASSIGNMENT TWO cont'd

8. What is the Max Value for HW 1?

   Max Value: _____

9. Under the General Information option can you enter the time of your conference period?

   Yes/No: _____

10. What is the preset breakpoint for a grade of C?

    Breakpoint: _____

11. Import the students for each of your classes and turn the diskette into Mr. Shirley.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 3.1

Complete the following activities on your computer with your partner.

1. Open one of the class files from your diskette.

2. From the Define menu select General Information.

3. Enter all the information for this class using the tab key to move from item to item; select OK.

4. Return to the General Information option and select Export option.

5. Select the "a:" drive and type in a name for the file, such as "info", and select OK. This file will be used later to eliminate the need to retype the same information.

6. Return to the main screen and select Letter Grades from the Define menu. With the Normal BreakPoints highlighted, select the Edit option.

7. Use the tab key or mouse to move around the screen. Enter the appropriate Value for each Letter and select OK.

8. With the Normal BreakPoints highlighted, select the Export option. Make sure that drive "a:" is selected and type in a name for the file, such as "letter"; select OK.

9. Return to the main screen. If you encounter a dialog box asking if you want to recalculate now, answer "no".

10. Use the Define menu to access the Categories option. Using the Delete, Add, and Insert options, customize your class file Categories to your grading criteria.

11. Enter the appropriate weights for each grade Category.

12. If you intend to use the Categories in step 10 in any other class use the Export option to give a name to this category configuration.

CLASS ACTIVITY 3.1 cont'd

13. Return to the main screen.

14. From the Define menu choose Grades and customize these to your satisfaction.

15. Make sure the Score Weight and Max Value are to your liking.

16. Use the Export option if you intend to use these Grades elsewhere.

17. Return to the main screen.

18. Choose Save from the File menu.

19. Choose Close from the File menu.

20. Open another class file from your diskette and access the General Information option.

21. Select the Import option and choose the name that you gave to this configuration in step 5.

22. Make the minor changes needed and select OK.

23. You will use the Import option to customize the rest of you class files for Assignment Three.

ELECTRONIC GRADEBOOK
ASSIGNMENT THREE

Complete the following activities on your computer and turn in your diskette to Mr. Shirley.

1. Customize the General Information for each class file.

2. Customize the grade Categories and Category Weight for each class file.

3. Customize the Normal BreakPoints for each class file.

4. Customize the Grades, Score Weight, and Max Value for each class file.

5. Be sure to save each file after making the customization changes.

6. Enter all scores for your students in each class file.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 4.1

Complete the following activities on the computer with your partner.

1. Open the American History class file.

2. Leigh Davis has been allowed to retake a quiz and has made a grade 85. The quiz is on Early Colonies in column 16. Use the scroll bars to locate the cell and click on it.

3. Press any key and observe the dialog box that appears.

4. Click on "Yes" or press "Enter" to change the grade.

5. Type in the new grade and press "Enter."

6. You realize that Martin Cortez received the grade that Allison Chen should have received.

7. Highlight the grade in column 11 for Martin Cortez. Press the Delete key to remove the grade. Answer "Yes" to the question, "Are you sure?"

8. Highlight the grade in column 11 for Allison Chen and type in the grade.

9. Linda Bailey has been withdrawn from the class.

10. From the Edit menu select Students.

11. Highlight Linda's name and choose Delete.

12. Answer "Yes" to the question and then select OK.

13. A new student has joined the class.

14. From the Edit menu select Students and choose Add.

CLASS ACTIVITY 4.1 cont'd

15. Enter the following student information:

    William Watson
    1234567
    9th
    4-15-80
    Male
    Phone: 555-1234
    Go By Name: Billy

16. Click on OK and then OK again to return to the main screen.

17. You decide to allow the students to earn extra credit towards their homework grades.

18. From the Define menu select Grades, highlight grade 16, and then choose Insert.

19. Enter "Extra Credit" for Grade Description, select None for Correlated Objective, and Homework for First Category Link.

20. Click on the box beside Extra Credit Grade. Click on OK and then click on OK again.

21. From the File menu select Close. Select No so that the changes will not be saved. If you were making changes to your file you would have selected Yes to save the changes.

ELECTRONIC GRADEBOOK
ASSIGNMENT FOUR

Do the following activities on your computer with your class files. Turn in the diskette to Mr. Shirley.

1. Edit your class files to reflect any changes in student grades since the beginning of the nine weeks.

2. Edit your class files to reflect any changes in student enrollment since the beginning of the nine weeks.

3. Add extra credit grades if you use them.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 5.1

Do the following activities on your computer with your partner.

1. Open one of your class files.
2. From the File menu select Print.
3. Use the scroll bar to select the Class Grades Report - Hardcopy.
4. Select OK and then OK again to print the report.
5. Examine the report. Can you use this information?
6. Print the report entitled Class Performance Summary for Period.
7. Examine the report.
8. Print the Student Progress Report, but print the reports for the first two students only.
9. Examine the report.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 5.2

Do the following activities on the computer with your partner.

1. Open one of your class files.

2. Move the mouse cursor to the right of one the student's names for whom you will be writing a note. The cursor will become a musical note when it is in the right position.

3. Click the mouse to open the dialog box, and select Add.

4. Type a name for the notes and press the tab key to enter the note itself.

5. Select OK and then OK again to return to the main screen.

6. Print a progress report for this student.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 5.3

Do the following activities with your partner on the computer.

1. Open one of you class files.

2. Position the cursor in one of the columns for a test or quiz.

3. From the Utilities menu select Bar Graph and the select Current Column; a bar graph should appear.

4. Click on Qprint to print a copy of the graph.

5. Select OK to return to the main menu.

ELECTRONIC GRADEBOOK
ASSIGNMENT FIVE

Do the following activities and turn in a sample of each printed report to Mr. Shirley.

1. Use the notepad to enter appropriate comments for the students who require them. One of these comments will be printed in step 3.

2. Print a copy of the current grades for your classes. Make an extra copy of one of the classes to turn in.

3. Print progress reports for all of you students. Turn in a sample of one student with an added comment.

4. Use the graphs option to display a summary of the performance of one of your classes on a test or quiz.

ELECTRONIC GRADEBOOK
CLASS ACTIVITY 6.1

Do the following activities with your partner on the computer.

1. Open one of your class files.

2. From the Options menu select Modem Settings. Observe the possible selections there. Return to the main screen.

3. From the Utilities menu select Sort.

4. Make the following selections:

   Key Type: Student Data Items
   Selected Key: Student ID
   Direction: Descending

   Select OK to return to the main screen. Double-click on the Student Index and select Student ID. Notice that the students have been sorted in descending order by Student ID.

5. Experiment with other sorting orders.

6. From the Utilities menu select Statistics. Select Current Column to view a statistical analysis of the chosen assignment.

7. Use the Statistics option to view information about a single student and then view information about the nine weeks grades.

8. From the Options menu select Set Colors. Select each of the different options and experiment with the colors. If you close the file without saving it, none of the changes will be kept.

ELECTRONIC GRADEBOOK
HANDOUT 6.1

GRADE SECURITY

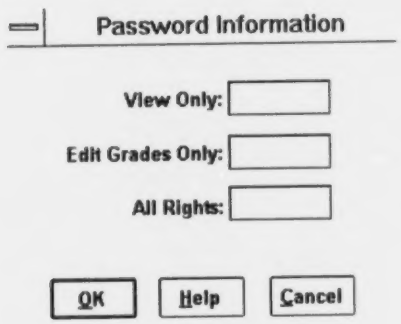
1. You should keep your class files on the diskette given to you or one like it.

2. Remove the diskette from the computer when you are not using it.

3. Keep the diskette away from moisture, heat, and dust.

4. Storing the diskette in a ziplock bag is a good idea.

5. Grade2™ allows you to enter passwords that restrict access to your files. From the Define menu select Passwords. You will see the following box.



6. Enter up to eight characters in the All Rights box. **Remember your password or you will not be able to access your grades.** Select OK, and the file will be closed to anyone who does not have the password.

7. These steps should be repeated for each class file that you want to secure.

ELECTRONIC GRADEBOOK
ASSIGNMENT SIX

Do the following activities and turn to Mr. Shirley.

1. Which menu is used to change modem settings and screen colors?

   Menu: _____

2. Open a class file. From the Define menu select Calculation Methods. Highlight Special2 and select View. Write down the formula displayed there.

   Formula: _____

3. Sort one of your class files by Student ID in ascending order.

4. Select Print from the File menu.

5. Select the "a:" drive and choose the report entitled Class Performance ID Only. Print the report and turn it in with the assignment.

6. Describe how you would secure a class file with a password.

7. What precautions should you observe when handling a diskette?

Appendix F

Final Test

Appendix F

Final Test

ELECTRONIC GRADEBOOK
FINAL TEST

Choose the best answer and bubble in the corresponding circle on the scantron sheet.

1. Which of the following is used to move up and down through the students in the class file?

   a. Menu Bar
   b. Function Keys
   c. Vertical Scroll Bar
   d. Horizontal Scroll Bar

2. Which of the following allows you to access the menu selections?

   a. Vertical Scroll Bar
   b. Horizontal Scroll Bar
   c. Title Bar
   d. Menu Bar
   e. Function Keys

3. Where on the main screen can you see a summary of your grade calculations?

   a. Result Column
   b. Menu Bar
   c. Bottom Status Line
   d. Title Bar
   e. Assessment Columns

FINAL TEST cont'd

4. Menu options that have three dots (...) following the description, activate:

   a. Data Windows
   b. a Dialog Box
   c. List Windows

5. To print a report you would use the following menu:

   a. File
   b. Edit
   c. View
   d. Select
   e. Define
   f. Utilities
   g. Options

6. Grade2™ keeps an entire school year's information in one class file.

   a. true
   b. false

7. Categories must be the same for each nine weeks.

   a. true
   b. false

8. You need to fill in all the information requested in the General Information.

   a. true
   b. false

FINAL TEST cont'd

9. If you want one grade assignment to count twice as much as the other grade assignments, what score weight do you enter?

a. 1
b. 2
c. 20
d. 50

10. A grade description can be up to _____ characters long.

a. 20
b. 40
c. 10
d. 8

11. Each grade must be assigned to a grade category.

a. true
b. false

12. Which menu do you use to enter Categories.

a. Define
b. Edit
c. Options
d. File

13. You make a grade assignment an extra credit assignment by clicking on the Extra Credit box.

a. true
b. false

FINAL TEST cont'd

14. To add students you would use the _____ menu.

a. Edit
b. Utilities
c. Student
d. File

15. You cannot change the screen colors.

a. true
b. false

16. You may have several different notepads for each student.

a. true
b. false

17. To access a student's notepad click on the _____ .

a. student's name
b. student column
c. musical note
d. Edit menu

18. Which menu is used to print a report?

a. File
b. Define
c. Options
d. Utilities

FINAL TEST cont'd

19. You cannot print a report for an individual student.

a. true
b. false

20. Which menu would you use to set passwords?

a. File
b. Define
c. Options
d. Utilities

21. Diskettes are not sensitive to heat.

a. true
b. false

22. Hot spots can be accessed by a double-click with the mouse.

a. true
b. false

23. Clicking on Cancel in a dialog box cancels any changes made and returns to the previous screen.

a. true
b. false

FINAL TEST cont'd

24. Which menu is used to change the letter grade breakpoints?

a. File
b. Options
c. Define
d. Utilities

25. Which option would you use to change the order of the students on the screen or in a report?

a. Sort
b. Options
c. File
d. Statistics

26. If you have a modem Grade2™ will dial student phone numbers for you.

a. true
b. false

27. Which of the following is not available by selecting Statistics?

a. T-scores
b. mean
c. deviation
d. variance

28. If you forget your password you can still get to your class files.

a. true
b. false

FINAL TEST cont'd

29. You can create your own grading formula.

a. true
b. false

30. Digiman is cool.

a. true
b. false

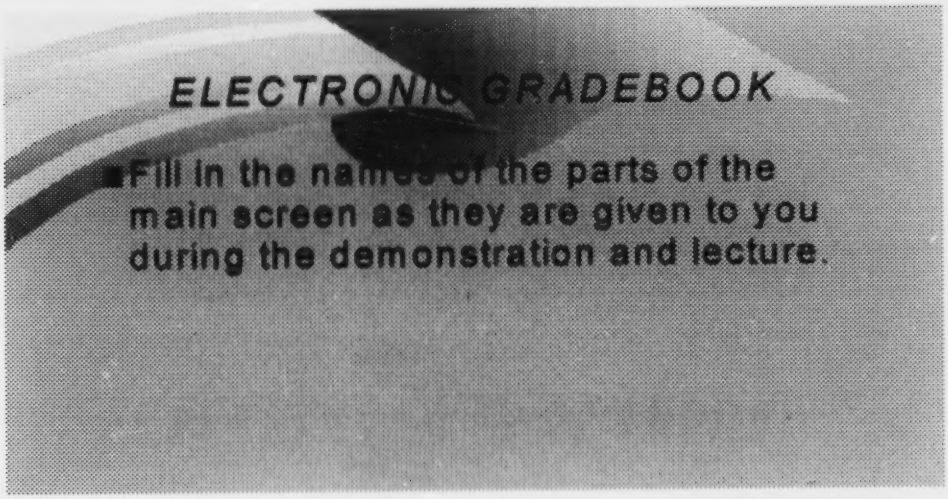
Appendix G

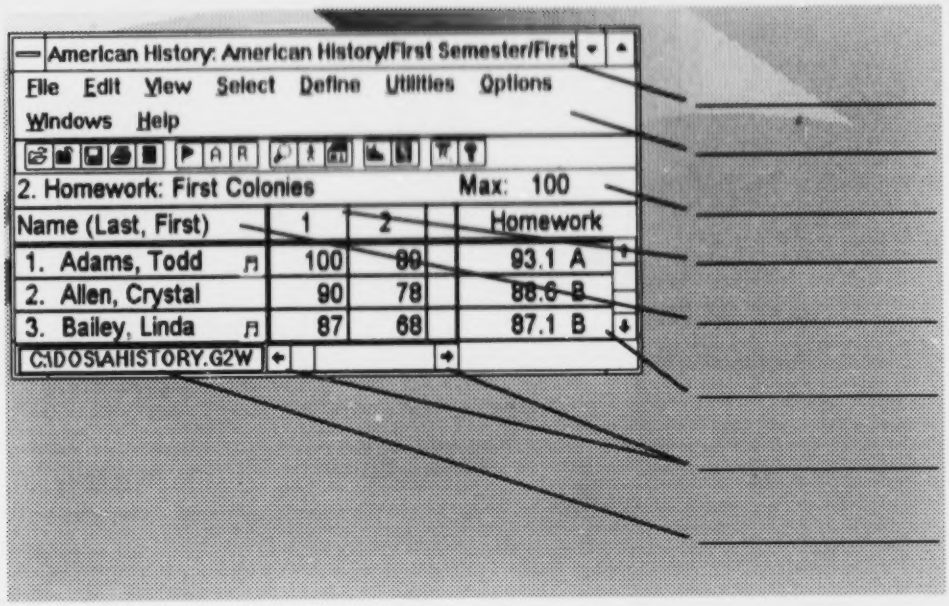
Slides

Appendix G

Slides

Slides for Handout 1.1


ELECTRONIC GRADEBOOK
Fill in the names of the parts of the main screen as they are given to you during the demonstration and lecture.



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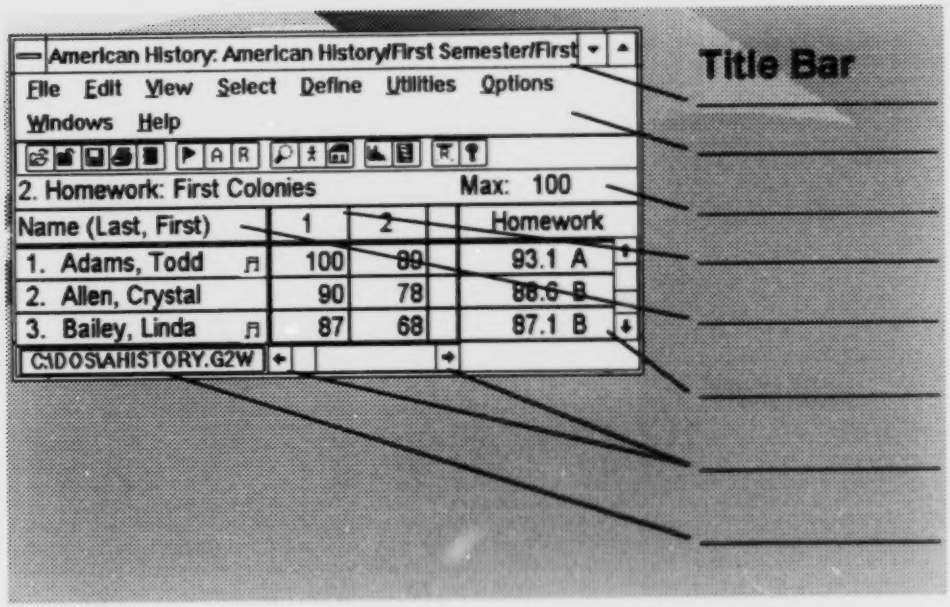
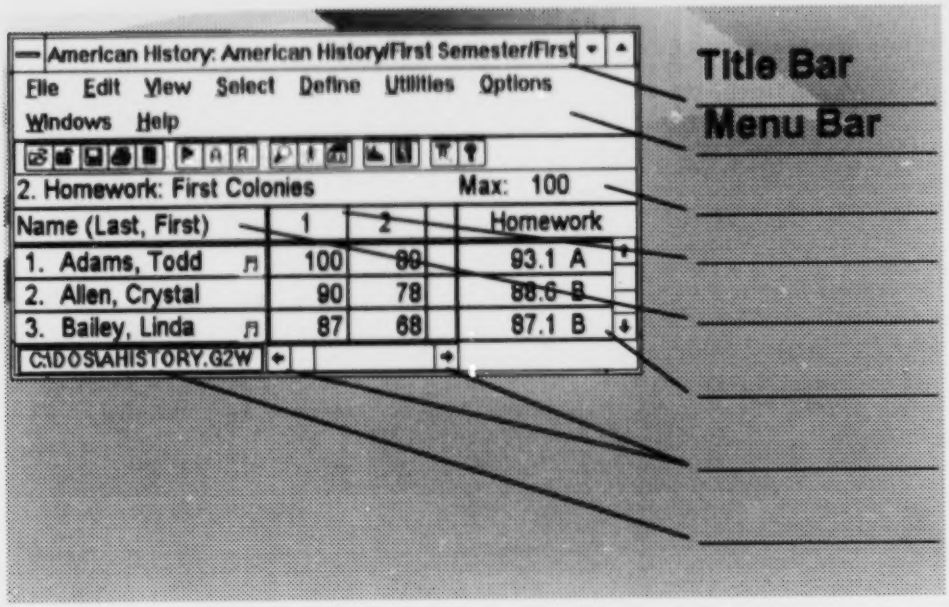

American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
1
2
Homework
1. Adams, Todd
100
99
93.1 A
2. Allen, Crystal
90
78
86.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
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2
Homework
1. Adams, Todd
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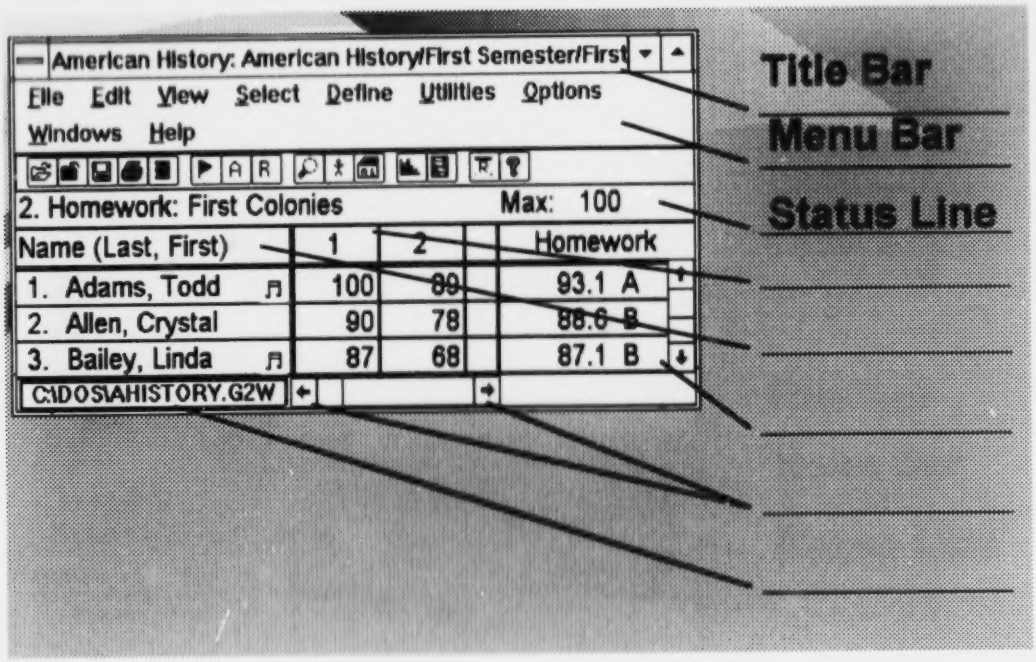
93.1 A
2. Allen, Crystal
90
78
86.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
1
2
Homework
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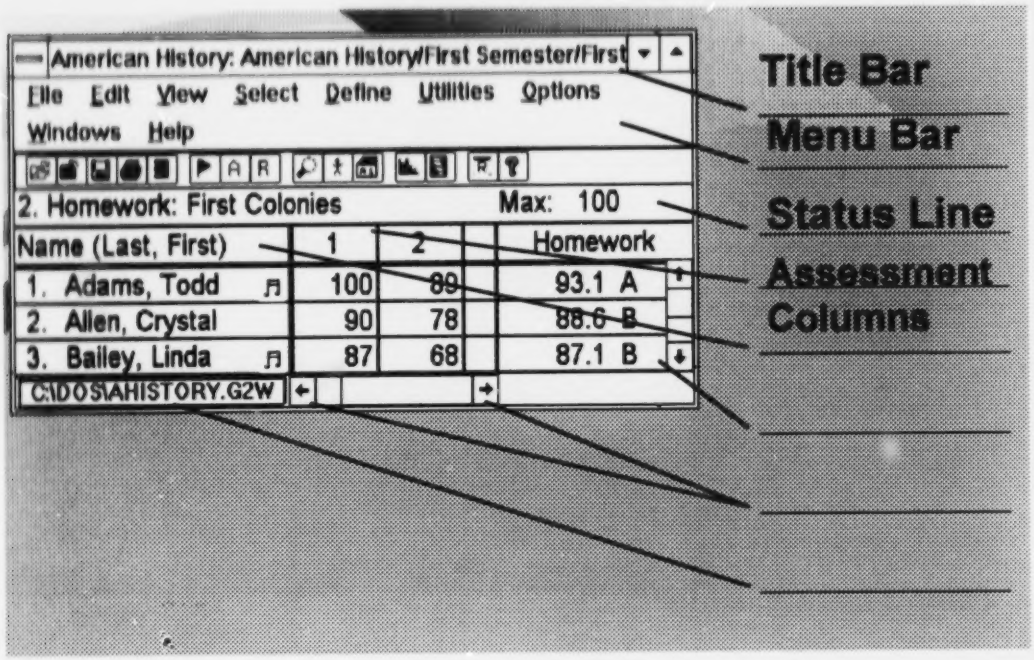
93.1 A
2. Allen, Crystal
90
78
88.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar
Status Line


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
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2
Homework
1. Adams, Todd
100
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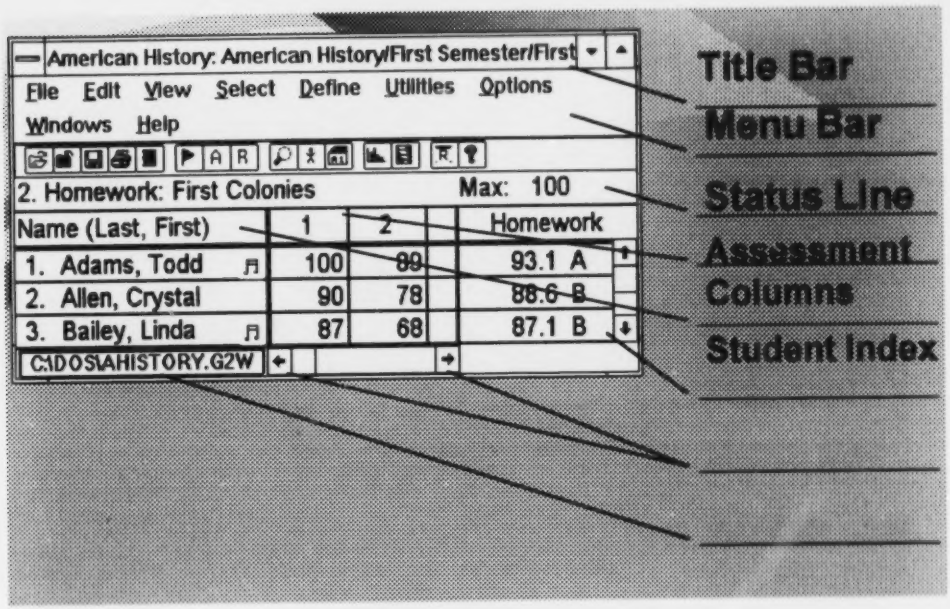
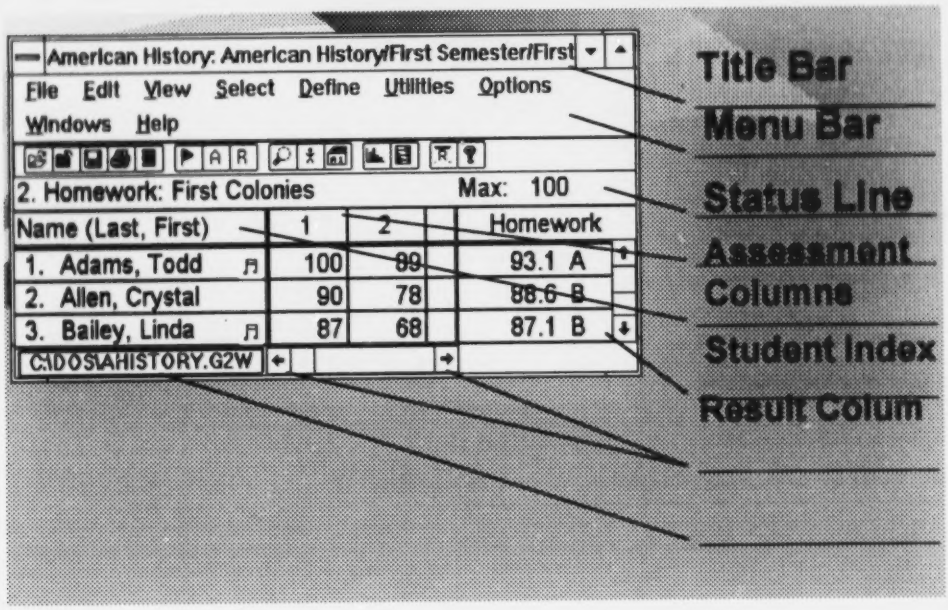
93.1 A
2. Allen, Crystal
90
78
88.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar
Status Line
Assessment Columns


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
1
2
Homework
1. Adams, Todd
100
89
93.1 A
2. Allen, Crystal
90
78
86.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar
Status Line
Assessment Columns
Student Index


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
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2
Homework
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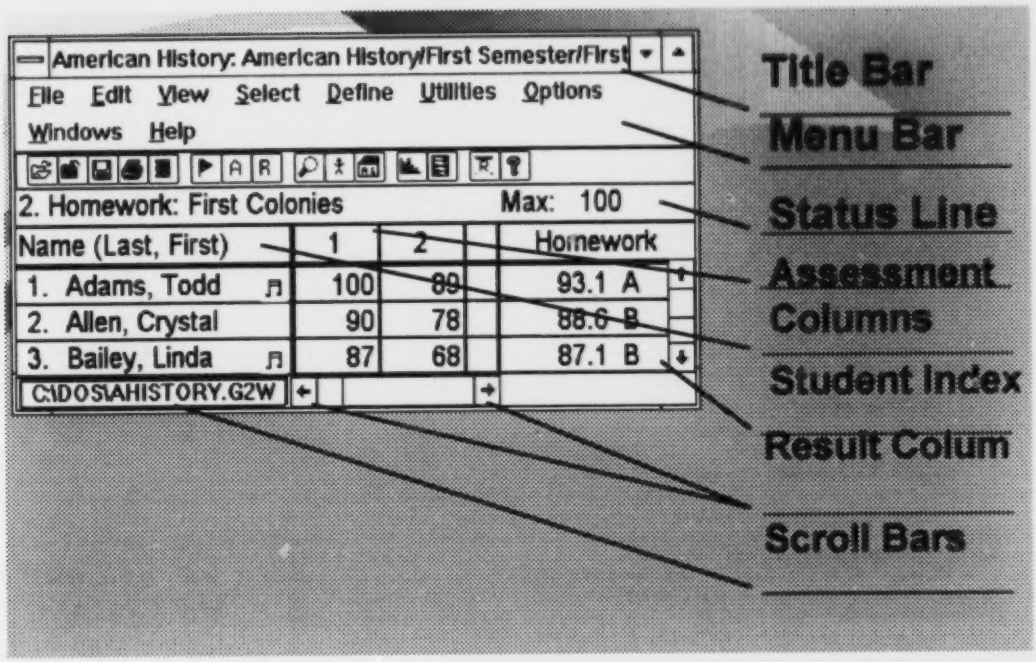
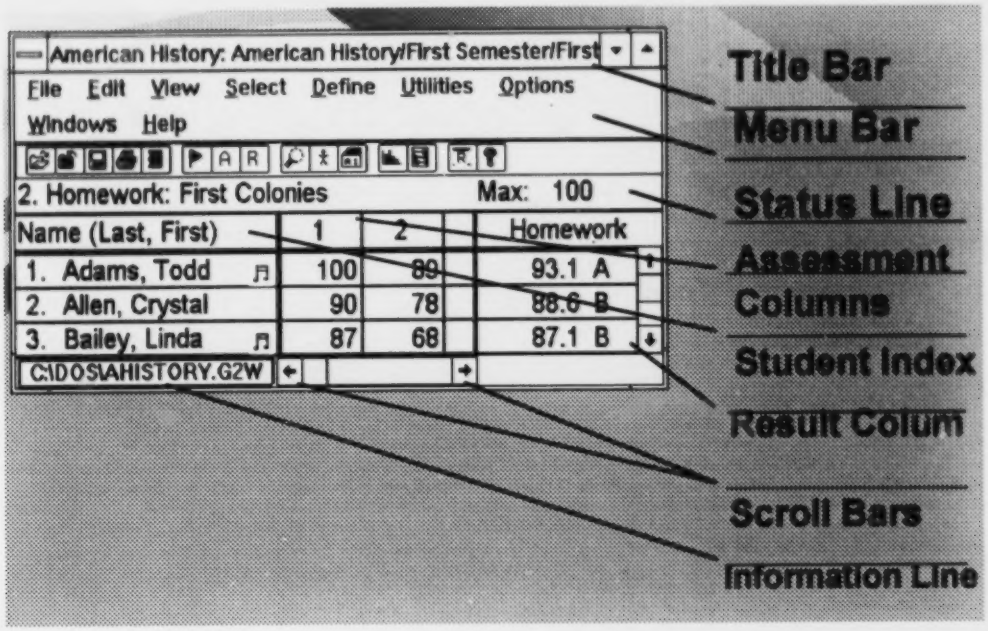
90
78
86.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar
Status Line
Assessment Columns
Student Index
Result Colum


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
1
2
Homework
1. Adams, Todd
100
89
93.1 A
2. Allen, Crystal
90
78
88.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar
Status Line
Assessment Columns
Student Index
Result Colum
Scroll Bars


American History: American History/First Semester/First
File Edit View Select Define Utilities Options
Windows Help
2. Homework: First Colonies
Max: 100
Name (Last, First)
1
2
Homework
1. Adams, Todd
100
89
93.1 A
2. Allen, Crystal
90
78
88.6 B
3. Bailey, Linda
87
68
87.1 B
C:\DOS\AHISTORY.G2W
Title Bar
Menu Bar
Status Line
Assessment Columns
Student Index
Result Colum
Scroll Bars
Information Line

■*MAIN SCREEN PARTS*

■1. Title Bar: Gives you information about Subject, Semester and Grading Period you are viewing.

■2. Menu Bar: The second line on your screen which lists the menus containing operations and options you can access by pulling down the menu.

■3. Status Line: Gives you information about your current grading column.

■4. Student Index: Lists information about your students.

■5. Assessment Columns: If you have grades in your file, they are displayed in columns on the screen.

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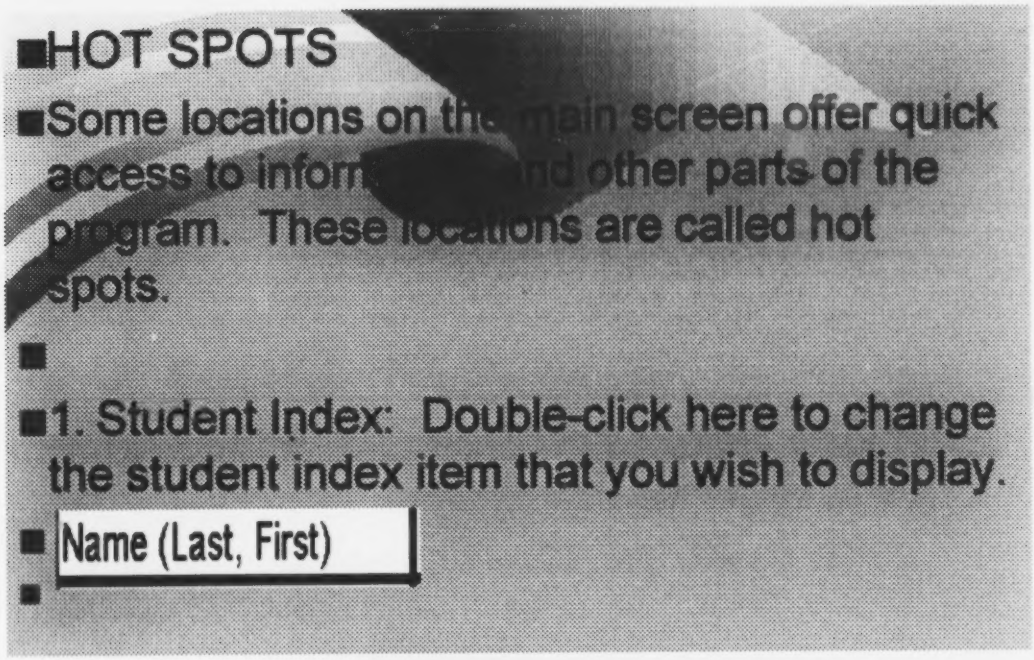
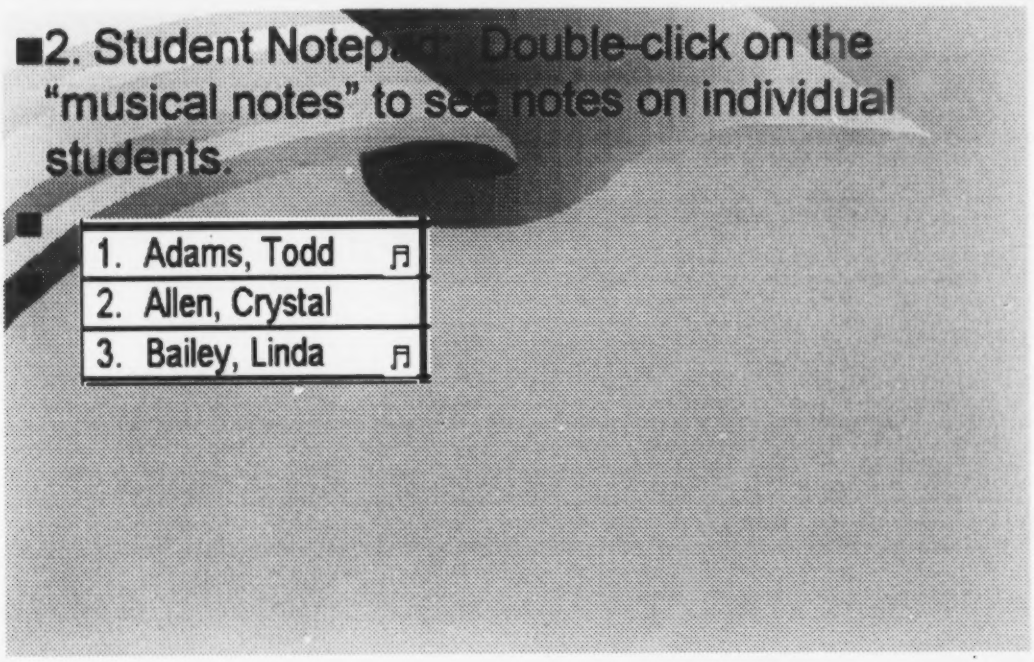
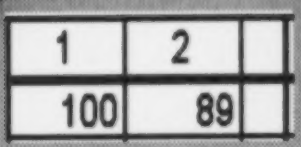
HANDOUT 1.1 cont'd

- 6. Result Column: located on the right side of your screen. It displays one of the various summaries that is calculated from your grade information.
- 7. Scroll Bars: Allow you to quickly move up and down through your students, and left and right through your grades with your mouse.
- 8. Information Line: Gives you the name and path of the class file you are viewing and/or editing.

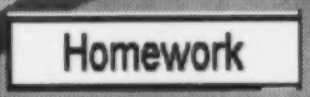

■HOT SPOTS
■Some locations on the main screen offer quick access to inform and other parts of the program. These locations are called hot spots.
■
■1. Student Index: Double-click here to change the student index item that you wish to display.
■ Name (Last, First)
■


■2. Student Notepad: Double-click on the "musical notes" to see notes on individual students.
■
1. Adams, Todd
2. Allen, Crystal
3. Bailey, Linda

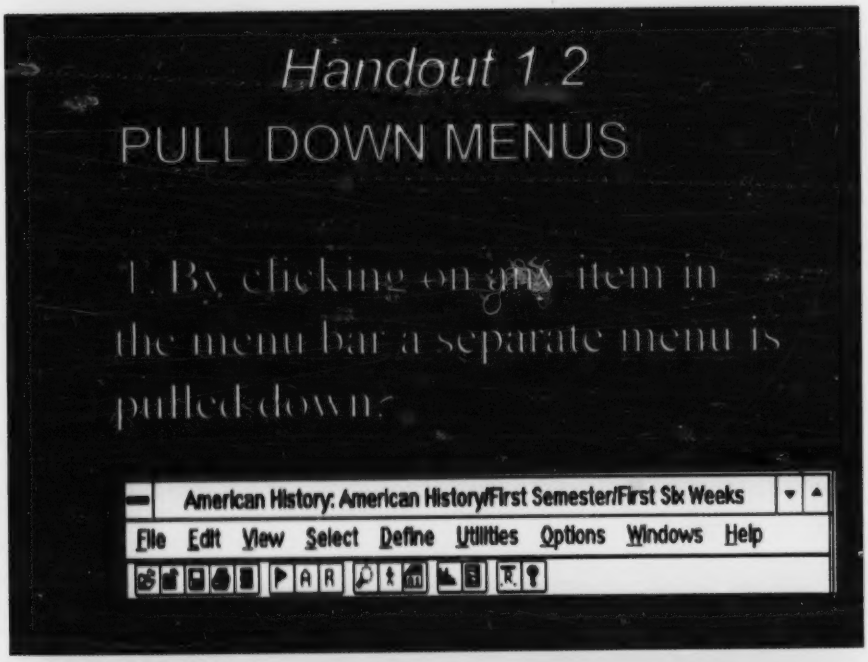
- 3. Grade Column Header. Double-click in the box at the top of the column to view or change the description of an individual assignment.

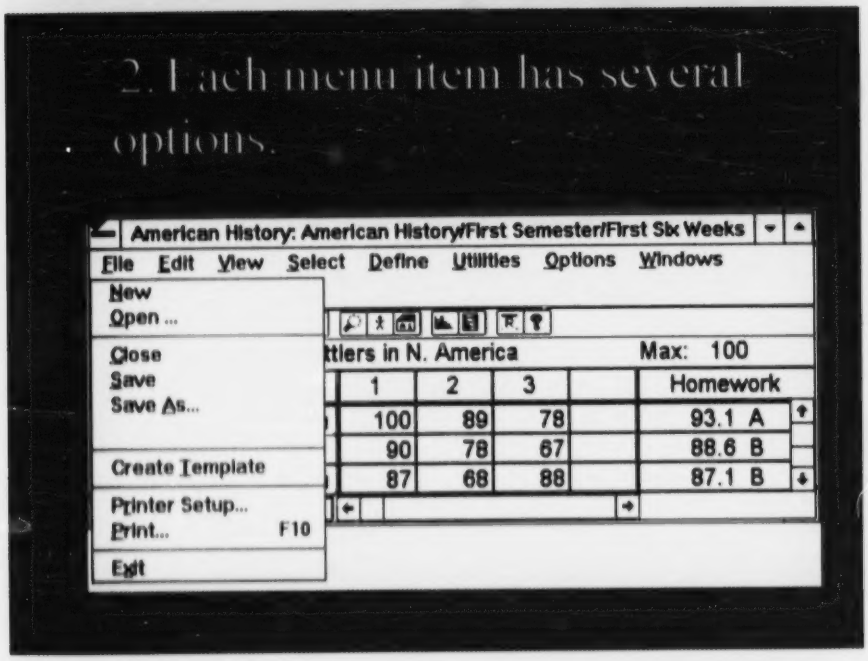


- 4. Result Column. Double-click here to change the level of grades you wish to see in the result column.



Slides for Handout 1.2


Handout 1.2
PULL DOWN MENUS
1. By clicking on any item in the menu bar a separate menu is pulled down.
American History: American History/First Semester/First Six Weeks
File Edit View Select Define Utilities Options Windows Help



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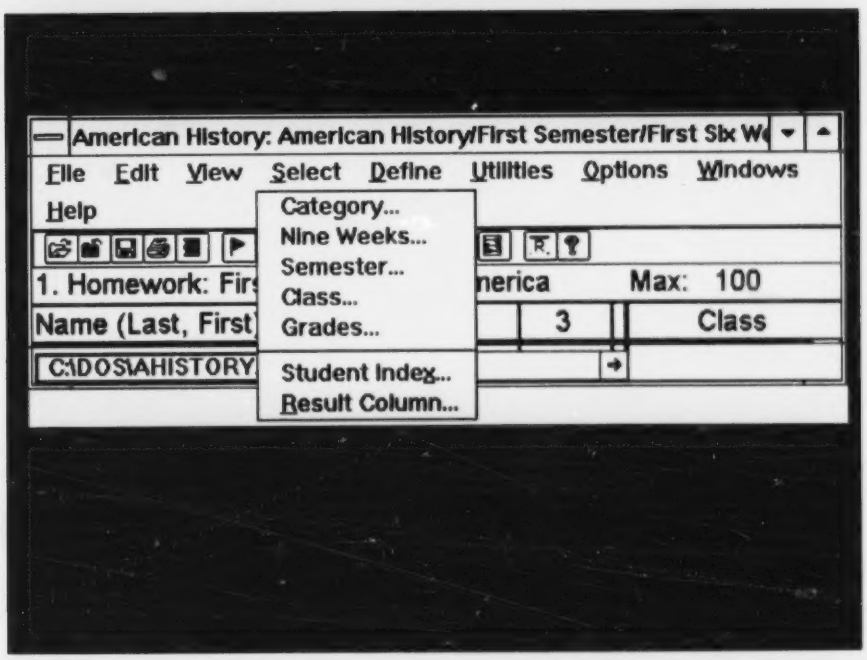
3. Selecting an item from a pull down menu will immediately your class file settings or give you a box with more choices. Menu options that have three dots (...) following the description, activate boxes.



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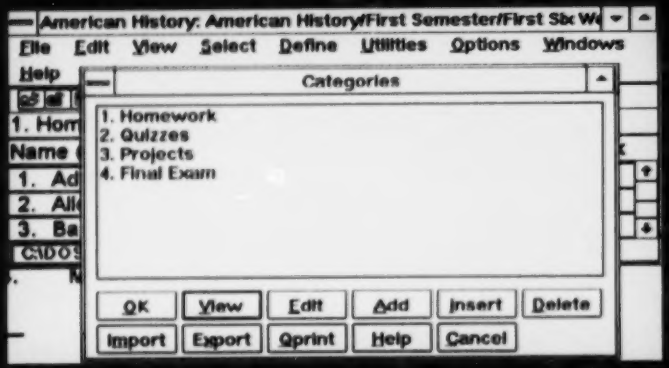
HANDOUT 1.2 cont'd

4. Many of the dialog boxes have choices.



OK: any data currently entered and closes the box.

View: Views the of the highlighted item.

Edit: Allows the editing of the item.

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Add: Places a new item at the of the list in the dialog box.

Insert: Places a new item the item currently highlighted.

Delete: the highlighted item.

Import: Reads a list of items from a file.

Export: Writes the list of items to a data file.

Qprint: a short report of the information contained in the box.

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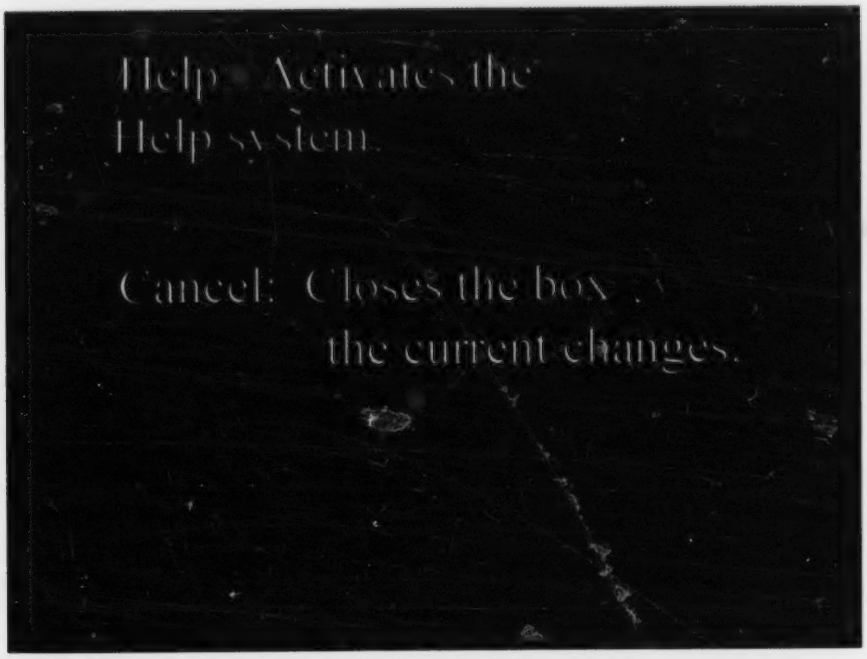

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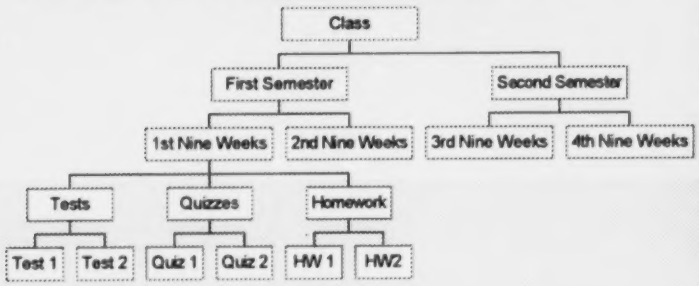
Slides for Handout 2.1

HANDOUT 2.1

- PARTS OF A CLASS FILE
- 1. The general structure of a class is illustrated below.
-



- 2. The parts of the class file are defined as follows:
- Class: A group of students in a particular class period that are scheduled to be in the class the entire year (entire semester for semester courses).

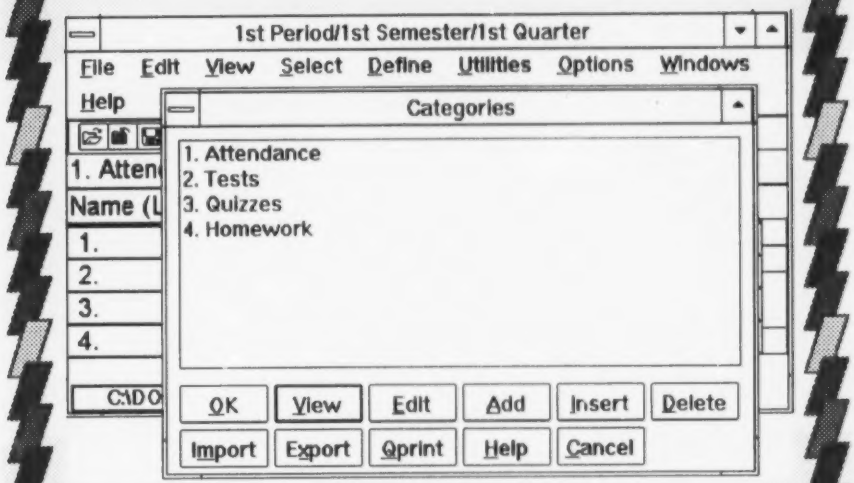
- Semester: Half of a regular school year.
- Nine Weeks: A regular grading period in our county .
- Categories: The different areas that make up a student's grade; tests, quizzes, and homework in this example

- Grades: The individual grade components for the students.
-
- 3. Adding and deleting students from the Class will be discussed later.

- 4. The Semester and Nine Weeks divisions are set for the year and do not need modification.

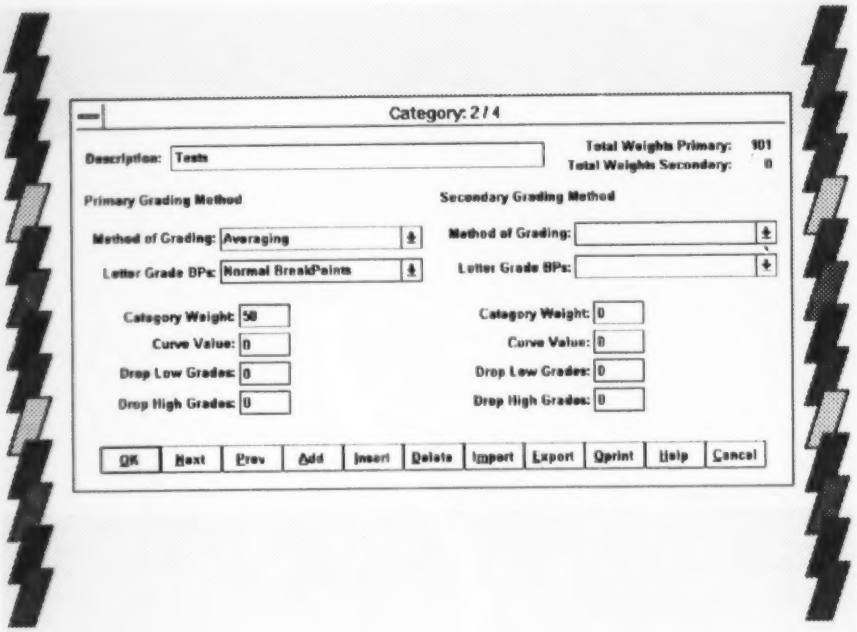
- 5. The Categories of Tests, Quizzes, and Homework can be deleted, expanded, or condensed according to each teacher's method of grading. Other Categories can be added, also

- 6. A Category can be deleted by selecting the Define menu and then selecting the Categories option.



- 7. The mouse is used to highlight the Category to remove; clicking on Delete removes the item.

- 8. By highlighting a particular Category in this box and selecting Edit, you can view and change the details of the Category.



- USING A TEMPLATE FILE
-
- 1. The class rosters for each teacher have been downloaded and imported into seven class files with generic names.

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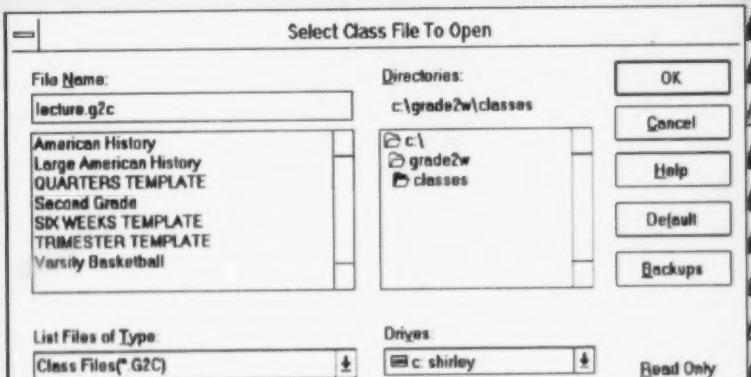
- 2. On each teacher's diskette are files named first, second, third, fourth, fifth, sixth, and seventh. Your students are in these files.

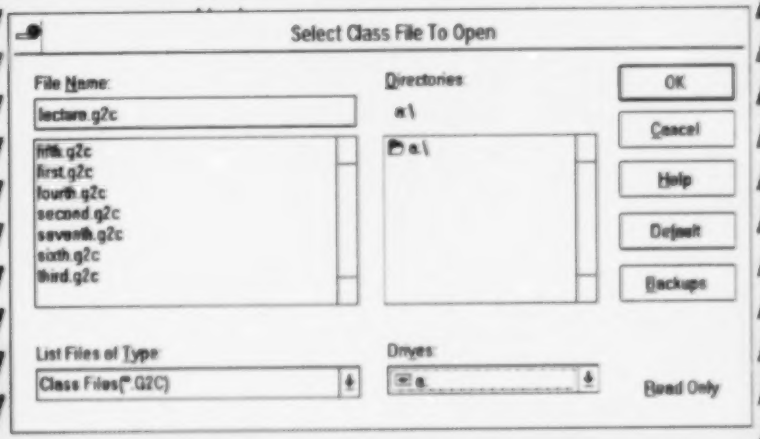
- 3. You can open these class files, customize them, and save them on your diskette.
-
- 4. You can open a file from the diskette by selecting the drive where the diskette is located.

- 5. This selection is made from the Open File dialog box which appears when the program is started or when the File menu is selected and the Open option is chosen.
-

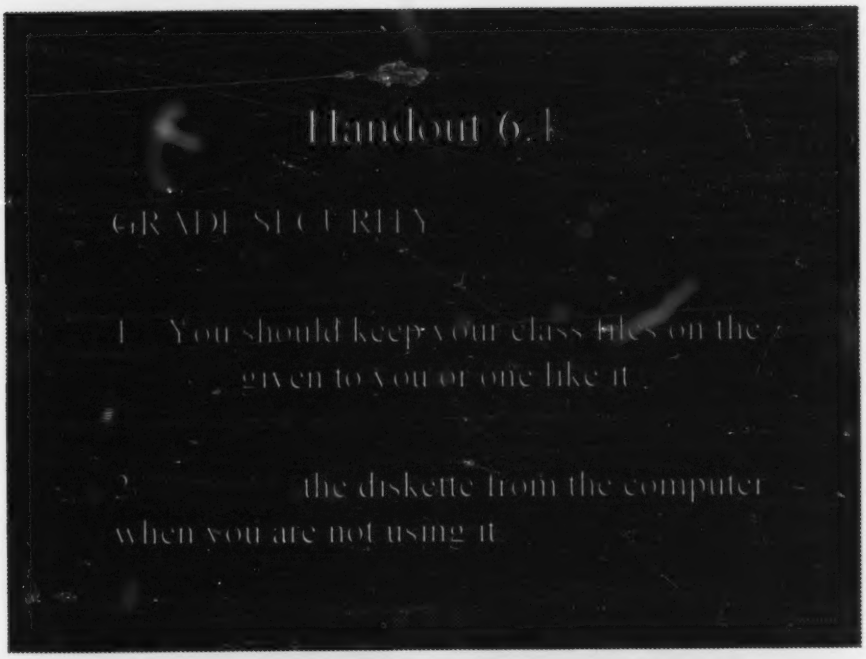


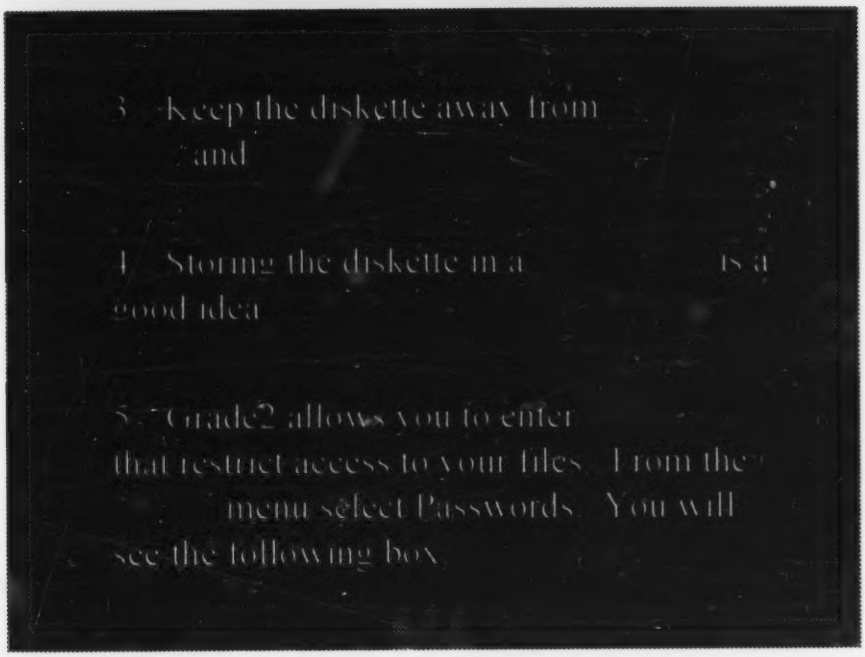
- 6. By clicking on the scroll bar near the Drives list, a list available drives is shown.
-
- 7. When the appropriate dirve is selected a list of available files is displayed under the Files Name list.

- 8. You can select the desired file with a mouse click.

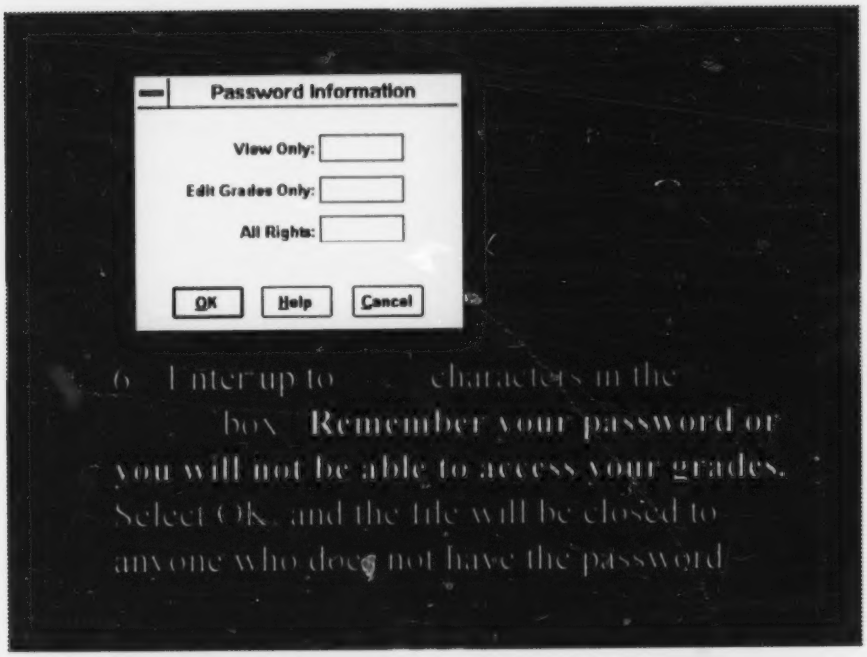


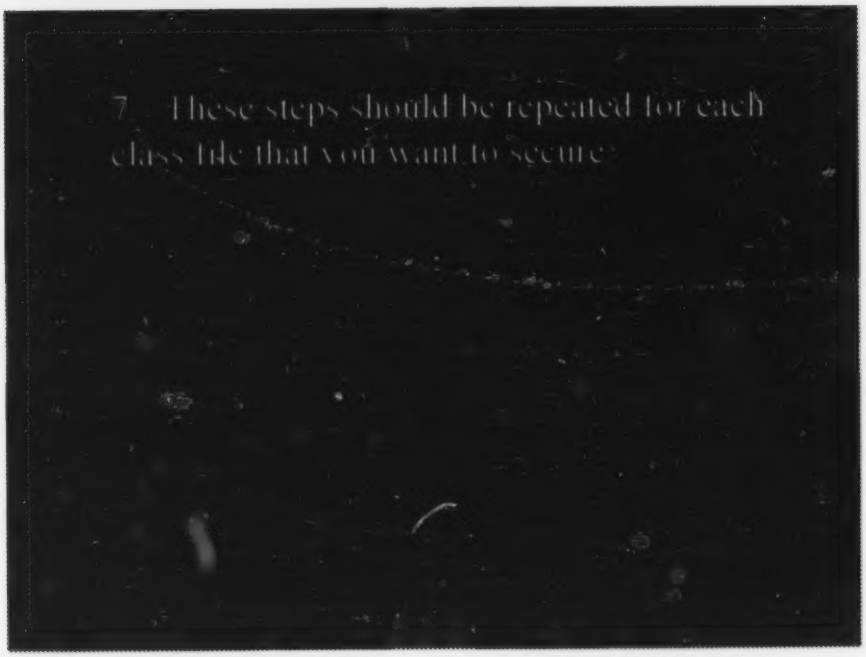
Slides for Handout 6.1


Handout 6.1
GRADE SECURITY
1 You should keep your class files on the
given to you or one like it
2 the diskette from the computer
when you are not using it


3 Keep the diskette away from
and
4 Storing the diskette in a is a
good idea
5 Grade2 allows you to enter
that restrict access to your files From the
menu select Passwords You will
see the following box

BEST COPY AVAILABLE


Password Information
View Only:
Edit Grades Only:
All Rights:
OK
Help
Cancel
6. Enter up to characters in the box. Remember your password or you will not be able to access your grades. Select Ok, and the file will be closed to anyone who does not have the password.



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Appendix H

Class Survey Form and Results

Appendix H

Class Survey Form

Circle the number that best describes your response to each statement. Use the following guide:

1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree

1. I feel comfortable using a computer.

   1 2 3 4

2. I am satisfied with my computer expertise.

   1 2 3 4

3. Working on a computer is like playing a game.

   1 2 3 4

4. Computers help me work more creatively.

   1 2 3 4

5. Computers provide better job opportunities.

   1 2 3 4

6. I feel comfortable saving information in a file.

   1 2 3 4

7. I feel comfortable handling a floppy diskette.

   1 2 3 4

8. I feel comfortable using a computer to write a letter.

   1 2 3 4

Class Survey Form cont'd

9. I feel comfortable using a computer to create a test.

1 2 3 4

10. I am not afraid of doing something wrong on a computer.

1 2 3 4

11. I feel comfortable learning new computer skills.

1 2 3 4

12. I am excited about the potential benefits of using a computer.

1 2 3 4

13. I can use a mouse well.

1 2 3 4

14. I have no trouble printing a document.

1 2 3 4

15. I am not afraid of erasing important files.

1 2 3 4

16. I can easily install software on a computer.

1 2 3 4

17. I have a good understanding of computer language.

1 2 3 4

Class Survey Form cont'd

18. I like using a computer to manage my grades.

1 2 3 4

19. Time goes by quickly when I am working on a computer.

1 2 3 4

20. Digiman should run for President of the United States.

1 2 3 4

Class Survey Results

Circle the number that best describes your response to each statement. Use the following guide:

1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree

	Item	Average Response
1.	I feel comfortable using a computer.	3.43
2.	I am satisfied with my computer expertise.	2.52
3.	Working on a computer is like playing a game.	2.96
4.	Computers help me work more creatively.	3.65
5.	Computers provide better job opportunities.	3.61
6.	I feel comfortable saving information in a file.	3.57
7.	I feel comfortable handling a floppy diskette.	3.57
8.	I feel comfortable using a computer to write a letter.	3.83
9.	I feel comfortable using a computer to create a test.	3.78
10.	I am not afraid of doing something wrong on a computer.	3.23
11.	I feel comfortable learning new computer skills.	3.50
12.	I am excited about the potential benefits of using a computer.	3.59
13.	I can use a mouse well.	3.55
14.	I have no trouble printing a document.	3.55
15.	I am not afraid of erasing important files.	2.95

Class Survey Results cont'd

16.	I can easily install software on a computer.	2.55
17.	I have a good understanding of computer language.	2.41
18.	I like using a computer to manage my grades.	2.95
19.	Time goes by quickly when I am working on a computer.	3.55
20.	Digiman should run for President of the United States.	3.36

Appendix I

Formatting Program

Appendix I

Formatting Program

```
{This program reads a text file, with a .txt extension, from disk, parsing
each line into individual components for each student.  The components
are reordered and connected with delimiting characters compatible with
the Grade2™ program.  Each reordered line of text is written to disk in a
directory named for the class teacher.  The new file has a .dat extension,
and the old file is deleted.}

program Convert4 (input, output, infile, outfile);

uses Crt, Dos;

var
  DriveSelect, MI, NextChar, Response, Answer :   char;
  LastName, FirstName, ID, Phone, Sex, Grade, Name, SeqNum, InPath,
  OutPath, DelPath, MakeDir  :   string;
  Directory  :  string [8];
  x  :  integer;
  InFile, OutFile  :  text;
  DirInfo:  SearchRec;
{*************************************************************************}

procedure MacVert;
  begin {MacVert}
    clrscr;
    write ('Enter the class sequence number.       > ');
    readln (SeqNum);
    writeln;
    InPath := DriveSelect + ':\' + SeqNum + '.txt';
    assign (Infile, InPath);
    OutPath := DriveSelect + ':\' + Directory + '\' + SeqNum + '.dat';
    assign (OutFile, OutPath);
    FindFirst (InPath, Archive, DirInfo);
    Answer := 'Y';
```

```
while (DosError <> 0) and ((Answer = 'Y') or (Answer = 'y')) do
  begin
    clrscr;
    repeat
      write ('Wrong sequence number; try again (Y/N)? > ');
      readln (Answer);
    until (Answer = 'y') or (Answer 'Y') or (Answer = 'n') or (Answer =
      'N');
    writeln;
    if (Answer = 'n') or (Answer = 'N') then halt
    else write ('Enter the class sequence number.       > ');
    readln (SeqNum);
    writeln;
    InPath := DriveSelect + ':\' + SeqNum + '.txt';
    assign (Infile, InPath);
    FindFirst (InPath, Archive, DirInfo);
  end;
Reset (Infile);
Rewrite (Outfile);
while not eof(Infile) do
 begin
  LastName := '';
  repeat
    read (Infile, NextChar);
    if NextChar <> ' ' then LastName := LastName + NextChar;
  until (NextChar = ' ') or eof(InFile);
  repeat
     read (Infile, NextChar);
  until NextChar <> ' ';
  FirstName :=NextChar;
  repeat
     read (Infile, NextChar);
     if NextChar <> ' ' then FirstName := FirstName + NextChar;
  until (NextChar = ' ') or eof(Infile);
  repeat
     read (Infile, NextChar);
  until NextChar <> ' ';
```

```
if NextChar <> '0' then
  begin
    MI := NextChar;
    for x := 1 to 6 do
      begin
        read (Infile, NextChar);
      end; {end for}
  end  {end if}
else
  begin
    MI := ' ';
    for x := 1 to 2 do
      begin
        read (Infile, NextChar);
      end; {end for}
  end; {end else}
ID := '';
  for x := 1 to 7 do
    begin
      read (Infile, NextChar);
      ID := ID + NextChar;
    end; {end for}
for x := 1 to 3 do
  begin
    read (Infile, NextChar);
  end;
Phone := '';
for x := 1 to 7 do
   begin
     read (Infile, NextChar);
     Phone := Phone + NextChar;
   end;
for x := 1 to 6 do
   begin
     read (Infile, NextChar);
   end;
Sex :=NextChar;
Grade :='';
```

```
      for x := 1 to 2 do
         begin
           read (Infile, NextChar);
           Grade := Grade + NextChar;
         end;
      Name:= "" + LastName + ', ' + FirstName + ' ' + MI + "',';
      ID := "" + ID + "',';
      Grade := "" + Grade + "',';
      Sex := "" + Sex + "',';
      Phone := "" + Phone + "',';
      if not eof (Infile) then writeln (Outfile,Name,ID,Grade,'' '',Sex,'' '','''
'','''' '',Phone,'' '');
      readln (Infile);
     end; {end while}
   close (Outfile);
   close (Infile);
   DelPath := '/C del ' + InPath;
   exec ('c:\command.com', DelPath);
   writeln;
   repeat
     clrscr;
     write ('Convert another (Y/N)?                > ');
     readln (Response);
   until (Response = 'y') or (Response = 'Y') or (Response = 'n') or
(Response = 'N');
   writeln;
end; {end MacVert}
{*************************************************************************}

{Main module}

begin
    begin
    clrscr;
    window (15,10,75,20);
    DriveSelect := ' ';
    repeat
      clrscr;
      write ('Enter the drive letter (a or b)        > ');
      readln (DriveSelect);
    until (DriveSelect = 'a') or (DriveSelect = 'b');
```

```
    writeln;
    write ('Enter the last name of the teacher      > ');
    readln (Directory);
    writeln;
    MakeDir:= '/C md ' + DriveSelect + ':\' + Directory;
    exec ('c:\command.com', MakeDir);
    Response := 'y';
      while (Response = 'y') or (Response = 'Y') do
      MacVert;
   end;
end.
```

Appendix J

Download Instructions

Appendix J

Download Instructions

CLASS ROSTER DOWNLOADS
BURNS JR. HIGH SCHOOL

1. Turn on the monitor and computer
2. Press "Ctrl-x" to exit to the DOS prompt.
3. Key "\3270" and press "enter" to begin the terminal emulation program.
4. Press "Alt-Page Up" to enter the terminal mode.
5. Key "SDHC" and press "enter" to begin the login sequence.
6. Key in your userid and press "tab".
7. Key in your password and press "enter".
8. Key "student" on the command line and press "enter".
9. Key "sd00" (sd and two zeros) and press "enter".
10. Use the down arrow key to move the cursor to the space beside "print system", and press enter.
11. Key "x" in the blank and press "enter".
12. Move the cursor down to the space beside "Miscellaneous Processing Printed at Your Site".
13. Key "x" in the blank and press "F3".
14. Move the cursor down to the space beside "Create Dialer File . . . ", and key "x" in the blank.

15. Key in the **four** digits of the sequence number and press "tab" three times to move the cursor out of the sequence number area.

16. Press "F4" to begin the the download. An "X" should appear in the lower left-hand corner while the file is processed.

17. When the message "Autodialer File Created" appears below the "Be Grade" entry at the bottom of the screen, press "F12" to leave the menu.

18. Press "F12" again.

19. Press "Alt-Page Up" to return to the DOS prompt.

20. Place the download disk in drive "a".

21. Key "receive a:\[sequence number].txt download" and press "enter". Enter the four digits for "sequence number".

    Example - **receive a:\0062.txt download**

    Please note that the slash following the colon is a backslash. It is **not** the slash under the question mark.

22. The message "File transfer complete", should appear after a period of one or two minutes.

23. Press "Alt-Page Up" to return to the terminal mode.

24. Key "sd00" (sd and two zeros) to return to the menu.

25. Repeat steps 10 through 24 until all the sequence numbers are processed for one teacher.

26. After the last sequence number is processed stop at the message "File transfer complete".

27. Key "convert4" and press "enter".

28. When prompted, key "a" for the drive unless the disk is inserted in drive "b".

29. When prompted, key the name of the teacher.

30. When prompted, key the first sequence number.

31. When prompted, key "y" to enter the next sequence number

32. Repeat steps 30 and 31 until all of the sequence numbers are processed.

33. When prompted, key "n" to answer the question "Convert another Y/N?"

34. If the sequence numbers for another teacher are to be downloaded, repeat steps 23 and 24.

35. Repeat steps 25 through 34 for each new teacher.

Appendix H

Permission to Reproduce

Appendix H

Permission to Reproduce

SEP-24-1923 10:18 FROM EXCELSIOR SOFTWARE TO 18137448393 P.02

Excelsior®
SOFTWARE INC. P.O. BOX 3416 GREELEY, COLORADO 80633 303-353-8311

September 25, 1995

Randy Shirley
Burns Junior High School
600 Brooker Road
Brandon, FL 33511

Dear Randy,

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I hope you find these materials helpful. Please call me if you have questions or want to discuss this further. I'll be happy to discuss any of this information with you. Good luck and thank-you for your interest.

Sincerely,

Ebbe Divins

Ebbe Divins
Director of Technical Support and Training